

J. G. Keapwell

THE
ART
OF
SURGERY:

In which is laid down

Such a general IDEA of the same,
as is founded upon REASON, confirmed
by PRACTICE, and farther illustrated
with many *singular* and *rare Cases* ME-
DICO-CHIRURGICAL.

In Two VOLUMES.

THE SIXTH EDITION.

By DANIEL TURNER, M.D.
of the College of PHYSICIANS in *London*.

Ὁ Βίος Βεαχὺς, ἢ τὴ τέχνη μακρὴ, ὃ τὸ κατεῖς
Ὁ Ζῆς, ἢ τὸ πᾶν σφαλερὴ, ἢ τὸ κείσιν χαλεπή.

Hippoc. pars primi Aphor.

VOL. II.

LONDON:

Printed for C. RIVINGTON, in St. Paul's Church-
yard; and J. CLARKE at the Bible under the Royal-
Exchange, M.DCC.XLII.

THE
FIVE
VOLUMES
OF
THE
HISTORY OF THE
CITY OF
BOSTON

BY
JAMES C. HARRIS
Author of "The History of the City of Boston"
and "The History of the City of New York"

IN TWO VOLUMES

VOLUME I

THE
HISTORY OF THE
CITY OF BOSTON

FROM
THE
FIFTH
CENTURY
TO
THE
PRESENT
TIME

BY
JAMES C. HARRIS

BOSTON
PUBLISHED BY
J. B. LEECH & CO.
1856



TO his FRIEND

Mr. JAMES FERN,

Senior SURGEON of St. Thomas's
Hospital, Southwark.

S I R,



IF other Authors (as is customary) are making court to *Dignities*, and high *sounding Titles*, in the way of *Patronage* to their *Publications*; it will be less wonder, that I, who take the Measure of Mankind from a different Standard, have singled you from some others of my Acquaintance, unto whom to dedicate this Second Volume of my *Art of Surgery*.

WITH me, indeed, to be *Right Honest*, in the most extensive Application of the Word, is to be *Right Honourable*; to be *Right Candid* or
A 2 Courteous,

Courteous, the same as to be *Right Worthy*, if not *Worshipful*; unto which give me leave to add, *Right Knowing*, or *Judicious*; and then, I think, I have laid down what is necessary to form a *good Man*, and a *consummate Artist* in his Profession.

THAT you, my old Acquaintance, have a rightful Claim to these, will be allowed, I dare say, by all who know you: So that whatever Faults may happen to be found with my Performance, there can be none, I'm confident, with my Choice of *Patrons*: the one being as universally respected by the *College of Physicians*, as the other is by the *Company of Surgeons*.

ACCEPT then, Sir, this Part of my Labours in the *Chirurgic Province*, and believe me to be, without a *Complement*,

Your Real Friend,

and Humble Servant,

D. T.

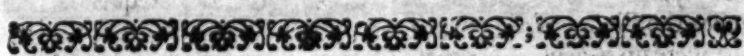


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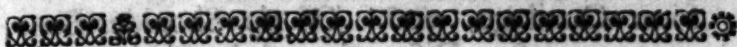


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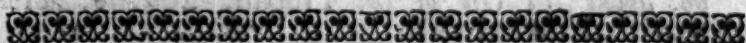


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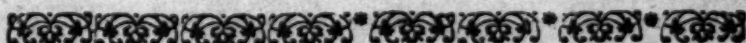


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THE



T H E
A R T
O F
S U R G E R Y.

V O L. II.

S E C T. VI.

Of ULCERS in General.



I N our two last *Sections*, we began and finished our Account of *Wounds in general*, as well as those of the *particular Parts*: In this I shall entertain you with that of *Ulcers*, intending to be more brief; and to shut up herein all I have to offer upon this Head. Whether or no this Discourse should not have preceded the two former, according to the Method of some Writers, may be disputed. But I, having tyed my self to no particular Precedent, do think the same as well observed now, and that there will be found as many *Ulcers* that are owing to *Wounds* neglected, ill-conditioned, or ignorantly handled, as to *Abscesses*, *Apostems*, or other Accidents, whether external or internal; letting this pass,

The Disease, which in *Greek* is called ἔλκος , by the *Latines* *Ulcus*, may be defined also, as the

V O L. II.

B

Wound,

Wound, a Solution of the Continuum in any part of the Body, but occasioned by some sharp Humour eating into, and corrupting the Frame or Texture thereof, which said Humour does in a manner as essentially difference the *Ulcer*, as the inflicting Instrument, the *Wound*.

Ulcers defined, with their Causes and Differences.

And thus where the same is thin and sanious, like Water wherein raw Flesh has been steeped, called *Gleet*, *Ichor*, also *Sanies*, it may be called a *Gleeting*, *Ichorous*, but is usually, a *sanious Ulcer*, when more thick and viscid, sticking like a sort of *Gluten* to the bottom, and termed *Sordes*, it goes under the Appellation of a *sordid Ulcer*. Again, when Matter of mean Consistence, called *Pus*, flows in large quantity, it is known by that of a *purulent Ulcer*.

From the Humour likewise grown corrosive, fretting and spreading farther, comes the *depaucient or eating and serpiginous Ulcer*, as those *Epithets* imply in their *Etymology*. From the milder, or the nutritive Juice, luxuriant and abounding in the same, the *fungous Ulcer*, or the *Ulcer* with spongy Flesh.

From the attending *Intemperies*, as if *hot* and *dry*, ensues the *Ulcer with Pain and Fluxion*: If *cold* and *moist*, the *putrid Ulcer*: From *Contagion* or *Infection* ariseth the *pestilential* and *venereal Ulcer*.

There are many Accidents also, or Symptoms, with which this Disease is complicate, and from whence it is denominated.

Thus, when the Juices flowing to the same, that should be turned into Matter, either for its Digestion; or good Flesh, for its Incarning; are, by the foregoing *Intemperies*, condensed and hardened round about the Sides or Edges, the *callos Ulcer* is produced.

When

SECT. VI. Of ULCERS in General.

3

When the Matter hath insinuated itself under the Skin or Flesh as is common after *Apostems*, from the *Sinuosity* or Hollowness thereby occasioned, we pronounce it a *sinuous Ulcer*, which after some time growing narrower, and hard, for want of timely Opening, or seated where it is hazardous, as about the *Joints*, among the *Ligaments* and *Tendons*, near the *Groin* or *Arm-pits*, or penetrating into the Cavities of the Body; *hard* I say, not only at its Entrance, but through its whole Passage, like a Pipe; it is thence distinguished by the Word *Fistula*, or is a *fistulous Ulcer*.

If situate close upon, or fed by some knotty obstructed Vein, we call *Varix*, it borrows thence its *Epithet* of a *varicous Ulcer*.

When, by the Virulency or Malignity of the Humour itself internally, the cold Air, or other Occasion externally, the Cover of the Bone is eaten off, and the Bone itself contaminated, or eroded by a *Caries*, or Rottenness thence arising, it is stiled a *carious Ulcer*.

Farther, from the *Figure*, we say an Ulcer is *round*, *angular*, *even*, *jagged*, *superficial* or *profound*, which last is also described as with *loss of Substance*.

By *Age* or Time of its Continuance, it is *recent* and *mild*, and *old*, (or, as it is called by some of our Authors, *annual*) and *rebellious*.

It would be too tedious and almost endless, to enumerate the Circumstances that diversify one way or other this Disease, which by the Ancients had most of them accordingly their Denominations originally from the *Greek Tongue*, without a Knowledge of which, at least so far as to come at the Derivation of our common Terms, tho' I can allow a Man may be a good Artist, yet but a lame *Theorist*, talking daily many Words like a *Parrot*, which he knows not the Meaning of!

Of ULCERS in General. Sect. VI.

and this I mention not, I protest to you, by way of Reflection, for I know many of you to be good Scholars, as well as excellent Artists, but as a Spur to excite the Industry of such as are wanting in this Knowledge of the Learned Languages, to obtain by all means so much thereof as may give them some *Idea* of the *Etymology*, or Ground of the Phrases they must continually converse with: As for instance, when they read of one *Ulcer* being called *Noma* (a putrid one so named by the old Writers) they may perceive it has that Name, ἀ νίμω, *depasco*; another of like corrosive Nature, *Phagedæna*, ἀ φάγω, *edo*, as formerly remarked: A *desfypulotic Ulcer* is so termed, ἐξ δὲς, *difficile ἐπὶ*, *super*, ἔ οὐλθ, *integer*, from its Difficulty to be brought to a *Cicatrix*, or to skin over: That all *Ulcers* which are stubborn, or, as they are termed, rebellious, come under the Name of *Cacoethic*, a Word frequently met with in chyrurgic Treatises, derived ἐκ κακῶν, *malum*, ἔ ἰδθ, *Mos*, vel *mali Moris*, of an evil Disposition; the *Herpes* ἀβ ἑρπω, *serpo*, from whence the *Serpigo*, implying the same fretful and spreading Malady.

But lest I should seem to you to act the *Pedant*, by a vain Ostentation or Shew of Learning, I will at present trace no more of these Names, with some other hard Words interspersed throughout these Sections, from their Originals, but leave them to be found, as you shall see occasion, at the Close: Which every one who is desirous to give a Reason for what he talks, will doubtless enquire after, and for whose sake I shall there insert a Table alphabetically digested.

There are yet two other *Ulcers*, and those of the worst sort, which, although they may be properly enough ranked under some of them already described,

SECT. VI. Of ULCERS in General.

described, yet is the Original of both derived from the *Mithologists* of old times, or the *Fables* of the *Poets*; I mean the *Telepbian* and *Chyronian*: the first so called from *Telephus*, a King of *Mysia*, Son to the famous *Hercules*, who, falling out with the *Græcians* in their Expedition against *Troy*, was wounded by *Achilles* the Son of *Peleus* King of *Theffaly*, and could have no Cure but by the Rust of the same Instrument which gave the Wound.

And hence probably not only the Source of our *Weapon-Salve*, but the like fabulous Accounts of *sympathetic* Cures. The other from *Chiron*, the Centaur, Son of *Saturn*, who, like to be surprized in Adultery by his Wife, transformed himself, as the Fable has it, into a Horse, upon which his Paramour conceiving, brought forth a kind of Monster, having the upper part Man, and the rest an Horse: Notwithstanding which, you must know, he was a most excellent *Physician* and *Surgeon* too, being Master even to the Father of *Physic*, as is sometimes stiled the great *Esculapius*: It was this Monster of a Man, they say, that made *Apollo* a Musician, and *Hercules* an Astronomer; but for the Cure of rebellious Sores or *Ulcers*, when they had tried all others, they were forced it seems to be beholden to *Chiron*. And thus you have the Poets Ground for calling stubborn *Ulcers* by the Name *Chyronian*; but whether this *Telephus* or *Chiron* were in being, when the valiant *Achilles* received his Wound in the Heel, which Wound proved mortal, I know not. This indeed stands farther upon Record, that our Herb *Centaury*, a most famous *Vulnerary*, is derived from him as a *Centaur*, and is by others named *Chironion*, from his Name *Chiron*; as is also our wild *Purslane*, *Telepbion*, from *Telephus*, (who was also a *Botanist*) above mentioned.

But leaving these, which, however less instructive, are I think a harmless Amusement; and, returning, there is a farther Distinction of *Ulcers*, truly worthy of your Notice, that is some Distemper which may be said to be, if not an *Original*, at least a *foster Parent*, and without respecting which, as was said at the close of our last, concerning *Wounds*, there will be no healing the *Off-spring*: Thus the *scorbutic*, the *strumous*, and the *venereal* Habits will require a different internal *Regimen*; although their *Ulcers* probably may be treated with the same local Remedies, concerning which I will no longer detain you, since what I have said, will, I think, serve to furnish the most material Differences and Distinctions.

As to the Causes of *Ulcers* in general, we have already observed them to be sharp Humours fretting of the Skin, and preying on the Flesh underneath, arising either externally, as by Burns and the like Hurts, or internally from the Blood it self, or some *Discrasy* in its Juices, particularly the acrid or salt Serum thereof; hence *Abcesses* or *Apostems*, being broke or opened, from the Acrimony of the Humours, often terminate in fretful *Ulcers*. Among the external Causes are likewise *Wounds*, which by reason of the Fluxion attending from the ill Habits abovementioned, having lost their first Shape, and remaining still hard of healing, neither admitting *Symphisis*, nor readily incarning by *Sylsarcofis*, but growing rather deeper, and enlarging their Borders, degenerate into this Disease, and, quitting their former Appellation of *Wound*, are called now by that of *Ulcer*.

In respect to these, there are some who are for a definite time set for the *Wound* to commence
an

an *Ulcer*; but considering the Nature and Differences of *Wounds* themselves, I think this is much better dated from the foresaid Change of Figure, whether into one of greater Profundity or Amplitude in the outer Dimensions, than directly from their Age: Since one after many Days or Weeks may properly enough retain its first Name of *Wound*, whilst another in half the time, by its corrosive or virulent Humour, falling down and preying on the Parts, may be called by that of *Ulcer*. As for the *Abscess*, opened especially by a *Cautstick*, there may be no Absurdity for ought I see, even the first Moment of the *Eschar* casting off, to denominate the raw Place an *Ulcer*.

The *Diagnostics* of this Disease are self-evident, when seated upon the outward Parts of the Body; but if internal, we are to gather them from the Complaint and the Matter, as also the way of Excretion: Thus purulent Matter vomited together with the Aliments, a Sense of preceding Pain and Anguish upon the same Region, indicates the *Stomach* ulcerated: But if coughed up, the Patient complaining of Pain and Soreness upon the Chest, Straitness and Oppression, inflammatory Disorder antecedent, and a subsequent *Hætic*, the *Ulcer* is in the *Lungs*; if issuing forth the *Pudendum*, the Complaint about that Region, in the *Womb*; but if flowing together with the *Urine*, attended with *Dysuria*, *Stranguria* vel *Ischuria*, in the *Bladder*, or its *Sphincter*. Thus according to *Hippoc.* Si quis sanguinem aut pus mingat, & squamas, & odor gravis sit, vesicæ exulcerationem significat. And again, Quibus in urina crassa existente fursuracea simul minguntur, iis vesicæ scabie laborant. If between the times of making Water, the same issues through the Urinary Passage in Men, without Complaint of Pain in the Parts, the Seat of the *Ulcer*, ac-

Diagnos-
tics of in-
ternal Ul-
cers.

Prognos-
tics of in-
ternal Ul-
cers.

cording to some, is in the *prostrate Glands*; but by later Discovery, in those of the *Urethra*, called a *Clap* or running of the Reins; if in like manner out of the *Vagina* in Women, it is either the same or a *Fluor Albus*; to distinguish which, I have directed you in my *Syphilis*, or *practical Dissertation on the Venereal Disease*. Lastly, if purulent Matter, less foetid than that from the Bladder, flow together in large quantity with the *Urine*, a gravative or tiresome Pain upon the *Loins*, we justly suspect an *Ulcer* in the *Kidney*: For tho' the same Oracle lays down the Matter doubtfully in these Words, *Si quis sanguinem aut pus mingat, renum aut vesicæ exulcerationem significat*; yet the Seat of the Patient's Complaint, the Smell or Scent of the Matter, with its Quantity, will distinguish from which of these Parts it proceeds; as he himself observes in this following, *Si quis sanguinem mingat, & grumos & urinae stillicidium habeat, & dolor incidat in imum ventrem & interfœminium, partes circa vesicam laborant*. But pretermittig any farther Account of these, as falling more directly under the Care of the Physician, we shall touch upon the *prognostic Signs* of *Ulcers* in general, and then hasten to their Cure.

Prognostics of
Ulcers in
general.

These are taken usually from the *Places of their Situation*, *their Complication and Duration*. Thus the *Ulcers of the Eye*, *Nose*, *the inward Part of the Mouth or Throat*, *outwardly on the glandulous Parts of the Neck*; *Ulcers on the Breast and lower Belly*; *also on the Legs*, *the Joints among the Ligaments, tendinous or nervous Parts*, are more troublesome than those upon the *Skin or Flesh* of some others.

From their *Complication and corrosive malign Nature*, so the *Hydropic*, *Strumous*, *Scorbutic*, *Venereal*, the *Sinuous*; much more the *Fistulous*, the *Fungous*, *Exedent*, *Putrid*, *Varicous*, *Callous*, *Cari-
ous*,

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rious, but above all the Cancerous, are more vexatious, hazardous and dangerous, than when unaccompanied with those Accidents. Besides which, farther give me leave to add from Hippocrates's Aphorisms; *Ulcerum circum glabra, maligna, nempe (ut inquit noster Lister in Commentariolo super hos Aphorismos) ex erosione partium ulceri circum jacentium, pili cadentes.*

From their Age or Continuance, in which respect the old, or, as they are called by some, *annual Ulcers*, are generally more stubborn and rebellious in their Healing, than the Recent. One very good Reason is given you by Hipp. in these Words: *Ulcerum quaecunque annua sunt, aut longius tempus occupant, necesse est os abscedere, & cicatrices carvas fieri*; implying, the *Desquamation* that ensues when the Scar adheres ever after to the Bone, leaving the said Hollow behind it; besides which, being healed, they are not void of Danger, unless all imaginable Care be taken in consulting the Physician, that by the most exact physical *Regimen*, the Juices of the Blood may be rectified, before the same are closed, lest the ancient Sluice shut up, through which the Humours have been so long accustomed to evacuate, the same pent up in the Vessels, kindle a hectic Flame; or seizing the tender Substance of the Lungs, produce a *Pulmonary*, or *secondary symptomatic Phibisis*, and bring on a *Marasmus*. In a Word, *Ulcers* which are the Effect of some preceding Distemper, as we have already just now remarked, *viz.* the *Dropsy*, *Scurvy*, *King's-Evil*, *Pox*, or the like, have their *Prognostics* depending very much on the Facility or Difficulty of curing such Distempers: the *Hydropic* particularly is most apt to gangrene and mortify, according to that *Aphorism*, *Hydropicis ulcera in corpore orta, difficile sanantur*: The Scar-
butic

butic and *Strumous* both difficult and tedious, the *Venercal*, if the Patient hath not been too much tampered with, and accustomed to *Mercurials*, at least was never *Salivated*, more hopeful.

Cure of Ulcers in general.

In the *Cure of Ulcers in general* as well as *Wounds*, there are many Intentions, as 1. The *Intemperies* attending, whether *hot*, *cold*, *moist*, or *dry*, or compounded thereof, must be corrected, together with the *Pain* and *Fluxion* owing thereunto, which in like manner is to be averted. 2. The *particular Symptoms* appertaining to each, and which obstruct the Cure, are diligently to be regarded: Thus in One, the *Callosity* is to be softened and rendered more pliable; in a Second, the *Fungus* corrected, called otherways *Hypersarcosis*; in a Third, the *Sinuosity* dilated; in a Fourth, the *Putrifaction* subdued; in a Fifth, the *Varix* suppressed or repelled, if not eradicated; in a Sixth, the *Caries* exfoliated; and so of the rest: Whilst in all the *Caebochymy* of the Blood is purged, and its particular *Dyscrasy* amended by *Specifics*, whether *Antibydropic*, *Antiscorbutic*, *Antistrumatic*, *Antivenereal*, or other proper *Alteratives*, as may best conduce to master the Distemper, of which the several *Ulcers* may prove to be the Offspring: Before we touch on each Particular whereof, I must farther acquaint you, that as they may be said to have all their *four particular Times* or *Stations* in like manner with other Diseases, viz. *Beginning*, *Augment*, *State* and *Declension*: So have they all, (unless you please to except the simple *Cutaneous*, which after Digesting requires only a new Skin,) *four general Indications* for their Cure, I mean *Digestion*, *Mundification* or *Deterfion*, *Incar-nation* and *Cicatrization*; of which we have already taken some notice in our last, concerning *Wounds*, where these Intentions were also wanting, and for

for which Cause we may be the shorter here: However, before we enter upon particular *Ulcers*, we shall, in as few Words as possible, direct the young Practitioner how he may best answer, I mean with what Medicines, each of these foregoing Indications; and first for his *Digestives*.

In Order to the *Digesting* of an *Ulcer*, you have *Digestives*, that old Medicament of the *Terebinth. cum Ovi Vitello*, with or without *Basilicon*, which is yet in use with some, as likewise the said *Basilicon*, to which, in regard of the Name, we should pay a mighty respect; and truly tho' we took little notice of it in our former Discourse of *Wounds*, giving then a just Precedence to the *Linimentum Arcaei*, yet in *Ulcers* it is often called for, especially that which of late Years is prepared with a full quantity of Wax, and leaving out the Pitch, whence, from its Colour, it hath received its additional Epithet of *Flavum*. The *Ol. Hyperic. Lumbric. Lil.* either run down with *Terebinth*, or some of the aforesaid *Royal Ointment*, named *Basilicon*, are notable *Digestives* in some Cases: But, in the use of such Medicaments, you must regard *Temperaments*, and the Condition of the *Ulcer*; I mean the *Intemperies* thereof, the *Sense* of the Part, and Site of the same: For Example, in dry Habits, with a hot *Intemperies*, the *Ulcer* in a fleshy Part, you may use the *Basilicon* by itself, or melted down in a Spoon with a small Proportion of the *Ol. Hyper.* In the *Corpulent*, with a cold or moist *Intemperies*, the Oils may be left out, and the *Basilicon* mixed with the *Linimentum Arcaei*, or a little of the *Bals. Tereb.* when if the Parts are sensible, these may suffice; but if less so, or where great Putrifaction attends, the *Ol. Tereb.* may be added, or the *Ung. Egypt.* likewise the *Præcipit. Rub.* (without which *Chirurgery* would be defective)

defective) may be sprinkled on the *Ulcer*, when the *Sordes* lye deep; or mixed with your *Digestive*, when loose or superficial; at these times also your Fomentations are necessary, prepared of the warm discutient Plants, to assist the Heat of the Part, where it is deficient or languid, and farther promote the *Digestion* of the *Ulcer*; which, if seated upon or near the *Joints*, where the *Ligaments* and *tendinous* Parts are concerned, as was observed in our discoursing of *Wounds* of the same, the *Basilicon*, how excellent a *Digestive* soever in fleshy ones, must be here changed for the *Ung. e Gum. Elemni*, with the *Terebintinate Balsam*.

From *Ulcers*, equally with *Wounds*, there flows naturally first of all under their crude and indigested State, a thin Humour or bloodyish Serum, called of some *Ichor*, of others *Sanies*; (tho' *Blankard* by this last will have meant a thick and bloody *Pus*) which, as we have already observed, is by the Surgeons named *Gleet*, being shed forth the broken Capillaries about the sides and bottom of the *Ulcer*, and continues during the said State: So soon now as this Humour, by the gentle Heat of the Part, and the Assistance of your Application, is farther concocted and turned into *Pus* or *Matter*, the Notes of which being good and laudable, we have already laid down in the foregoing Section, the *Ulcer* is then said to be *digested*, being the *first Step* to Healing, and without which you must in vain expect a Cure; after this we come to *mundify* or cleanse, which by the Artist is named *Deterging*.

Deterfives. The Remedies for this purpose are of several sorts; among the Simples are reckoned the *Rad. Apij. Aristoloch.* the *Fol. Diſtamm. Chelydonij. Hyssop. Marrubij, Centauri*, with the *Farina Fabar. & Lupin.*
Medicines

Medicines ready compounded are the *Mundif. ex Apio. Ung. Apostol. Fuscum Wurtzij, Ægyptiacum*. But whoever rightly understands the Use of the foresaid *Præcipitate*, either alone strewed on or mixed with the *Digestive*, will scarce need other *Detergent*; which kind of Medicament must always be proportioned in Strength to that of the *Habit, Age, Sex, Situation* and *sordid Condition* of the *Ulcer*: For as the tender and weakly Constitutions require the mildest, such as the foresaid *Præcipitate* in small quantity, mixed with *Basilicon* or *Liniment. Arcei*, as the Part ulcerated requires: So in strong rustic Bodies, you may use that Powder by itself, or in larger quantity mixed up with your Ointment, if not with the other more sharp *Deterfives* enumerated just before: To the Use of all which, the State of the *Ulcer*, and the Sense of the Part, or your Patient's Complaint, will best direct you; and this is the *second Step* to the Healing of *Ulcers in general*.

The *Third*, in a regular Progression, is *Incar-nation*, and without this orderly way taken, there can be no such thing as obtaining the End you aim at; for he that goes about to *incarn*, before he *mundifies*, or *detergeth* either before he *digests*, is like the Builder who pretends to raise a Superstructure without a Foundation, or to lay such Foundation at the House-top; and this End is obtained by the engendering good Flesh, to repair the Substance lost, being more particularly Nature's Work, which she is commonly forward enough to perform, if all Obstacles thereto are removed by Art, directing such Remedies before recited, as may not only cleanse away the Filth or Rubbish that lies in her way, with their kindly deterfive Quality, without biting, but also by
their

their moderate Warmth and Desiccation, conserving the native Heat, with the proper Tone of the Part, making way for a commodious Influx of the nutritive Juice, which by the light Astringency of the same, laid thus down by the Pores, are converted into new Flesh.

Sarcotics.

In the *Class* of Simples of this Kind are numbered the *Millefol.* *Sigillum Solomonis*, *Equisetum* *Plantago*, *Centinodium*, *Alchymilla*, *Sanicula*, with many other *Vulneraries*, so termed from their sanative Property, and their gentle Astriction, by which they are fitted to dry up the superfluous Humidity of the Parts. Many of the *Gums*, among which the *Resina Communis*, *Tbus*, *Myrrba*, *Sarcocolla*, *Aloes*, *Olibanum Elemni*, *Terebinth. Pix*, with others; in the same Rank are reckoned also by some the *Farina Hord.* *Fenugn.* *Lupin.* the Powders of which being mixed up with *Terebinth.* or sometimes with *Mel Rosar.* also with the common *Basilicon* and *Liniment*, are made hereby more or less desiccating, as the Condition of the *Ulcer*, moist or dry, or the Patient's Habit shall require, which was observed in the two foregoing Indications. By way of farther Distinction in this Particular, you will infer your *Sarcotic* is too weak, or not sufficiently drying, if much *Quittour* flow from the *Ulcer*, the *Flesh* continuing spongy; on the other hand, if the Edges of the same are over dry, and the *Flesh* rather wastes than shoots up, it is an Argument that the same has been too biting and *stiptic*: But when your *Incarnation* arising, appears fresh, red, and withal firm, the Discharge daily lessening, the Aspect every way promising, and your Patient easy, it is an Argument that your Medicine is well tempered according to *Sennertus*, and indeed to right Reason.

Out

Out of several Forms of *Sarcotics*, which I have at some times used my self upon extraordinary Occasions, I shall single out the following, recommended by the best *Writers* in *Surgery*; the first from *Wiseman*:

℞ *Myrr. Aloes Pulv.* ā ℥ss. *Thuris* ℥j. *Masticb.*
Gum. Elemni ā ℥ij. *Tereb. Ven.* ℥iv. *Ol. Hyper.*
q. s. ut f. Unguent. Vel

℞ *Thuris Masticb. Sarcocol.* ā ℥j. *Ol. Hyperic.* ℥ij.
Ceræ Albæ q. s. ad Unguenti consistentiam.

To these may be farther added, the *Pulv. Aristoloch.* *Ireos*, or the Species incorporated with *Mel Rosar.* and used as a *Liniment* upon your *Dossils* or *Pledgets*.

The *Yellow Basilicon*, or the *Liniment of Arcæus*, with more or less of the *Præcipitate*, has, very often with me, answered the three Intentions of *Digestion*, *Deterfion* and *Incarnation*: The *Basilicon* of *Dr. Read* for the same End, which is much preferable to the old Composition of the Shops; under that Name is the following:

℞ *Ceræ Citrin. & Resinæ Claræ* ā ℥vj. *Pic. Naval.*
℥iv. Gum Elemni ℥ij. *Ol. Oliv.* ℥v. *Vernic Claræ*
℥iv. Sevi Ovil. ℥ij. *Tereb. Ven.* ℥iiss. *Pulv. Myrr.*
ac Oliban. ā ℥j. *liquefcent. f. a. ut exinde f. Un-*
guentum.

When you have thus filled up the Sore with firm or sound Flesh, you have then gained the third Step in the Cure of Ulcers; and there remains no more but to dry up the Superficies into a *Cicatrix*; and here I think *Art* may be said to take place of *Nature*, who, if not hindered at this time, and stopped in her Work, would over-act her Part, and produce a *Sarcoma*: to prevent which,

which, 'tis the Surgeon's Office to overlook her, and, when he sees it necessary, oblige her to cease, by sprinkling some more desiccative Powder upon this new-raised Flesh, or a *Pledget* armed with some proper *Epulotic*, proportioned still, as before, to the Condition of the *Ulcer* more moist or dry, and the Strength of *Temperament*.

The Simples for this Use are the *Cort. Granat. Flor. Balauſt. Fol. Roſ. Rub. Rad. Torment. Biſtort.* Among Earths and Minerals, *Bolus Verus, Lapis Calamin. Tutia, Ceruſſa, Lithargirum*; stronger yet are the *Alumen, Vitriolum, Calx Viva*, which are sometimes wanted, when the Flesh is too moist and luxuriant.

The Compounds for this Intention are the *Ung. Diapomph. Deſic. Rubrum de Calce, de Tutia, Album*; and, without Vanity I can say, beyond them all, my *Ceratum de Lapide Calaminari*, which I have, for a general Benefit, published in my Treatise de *Morbis Cutaneis*, at the Close of the Tenth Chapter, concerning *Burns of the Skin*; and which I will here also insert, for the Advantage of those who are not possessed of the same:

℞ *Butir. Rec. mense Maij collect. & sine sale præp. Cerae Citrin. optime defæcat. ā Hijs. Ol. Oliv. rec. & puris. Hrv. Lapid Calamin. select. (non rubri aut lateritii coloris) subtilissime trit. & cribat. Hvj. ℥x. liqueſcant Cera cum Butiro in vasculo, idoneo lento igne, una cum Oleo, & liquefacta colentur per pannum cannabinum in vas alterum, statimque inſperge Pulverem, gradatim, continuo agitando mixturam e fundo vasis donec frigescere incipiat, & Pulvis præ pondere suo, non amplius ſubſidere poſſit.*

To these are added a Solution of the *Calx* in fair Water; likewise of the *Alum* and *Vitriol* in rustic Bodies, and *dysepulotic Ulcers*; not forgetting

ting, among the generality of them, that excellent *Epulotic*, a simple *Pledget of dry Lint*.

And thus having arrived at the *last Step*, and finished the Cure of *Ulcers* in general, I intend, for your farther Information or Instruction, to revise them separately, at least the more material; and in speaking thereto shall lay down such farther brief Directions, as may be of service to you in the Management of each, as they happen to be complicate with their several Accidents: But first a word or two of the *simple Ulcer*.

An *Ulcer*, however simple or unaccompanied with *Intemperies*, Loss of *Substance*, or other Attendant, does yet require, like the contused *Wound*, to be *digested*; otherwise a slight Rancpling or Festering, as they are called, in an Ill Habit of Body, has occasioned many times the most formidable Symptoms; and a slight Raze of the Skin, neglected, often introduced an annual Ulcer, attending the unwary Patient, perhaps to his Life's End: Which should caution every one, how he trusts to the *Goodness* of his *Flesh*, his *Urine*, *Loaf Sugar*, and that common, but pernicious Application, the *Gold Beaters Skin*, from which particularly, I have seen bad Consequences; and rather, in these trivial Hurts, to hasten *Digestion* by a *Pledget of Basilicon*, or *Linim. Arcei*, after which some gentle *Epulotic* before mentioned, will more securely heal up the Breach; but whoever will experiment my foresaid *Cerate*, will seldom find occasion, from first to last, to use other Remedies in their *cutaneous* or skin-deep Maladies.

Of Particular ULCERS.

AMONG the Symptoms attending *particular Ulcers*, we shall begin with *Pain*, as the most

common, and creating Trouble in the Healing, till the same is removed: Of which there are sundry Causes, as the *Fluxion of Humours*, the *hot and dry Intemperies of the Part*, the *exquisite Sense thereof*, the *ill Position of the Member*, *Irregularity of the Patient*, and too often the *Ignorance of the Surgeon*, in not rightly managing the *Bandage*, or *proportioning the Strength and Heat of his Medicines to the diseased Part*.

The Ulcers with Pain and Fluxion from a hot Intemperies.

The *Fluxion* is best prevented by *Bleeding* and *lenient Purgation*, whilst the hot and dry Distemperature (the most troublesome of the rest) is corrected by some *Anodyne* refrigerating *Topics*, such are the *Decoctions or Juices of the Føl. Acetos, Endriviæ, Cichor. Lactuca, Prosulacæ, Nymphaeæ, Hyosciami, Sedi, Solani*; of which *Cataplasms* may be prepared, by thickening with the *Mica Panis, Album Ovi*; adding the *Unguent. Popul. Nutritum Pomat. vel. Alb. Campb. Embrocations* also with the same, or the *Olea Rosar. Viol. Sambuc. Hyosciami, Papav. Alb. Compresses* also, dipped in *Oxycrate cum Alb. Ovor.* then expressed and rolled moderately on above the Parts as *Inter-cipients*: But these must be renewed often; *Defensatives of Diapalma, Bolus Verus, Ol. Ros. & Acetum* may be applied after like manner, to answer the same.

In respect to the Sense of the Part hurt, as supposing those which are *nervous and tendinous*, let them be carefully defended from the cold Air, as we observed in Wounds, where those Parts lie bare, covering them with a warm Staph expressed from a proper *Fotus*, whilst the Applications are composed of such Medicaments as we directed in our Account of Wounds, of the said sensible nervous Parts.

As

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As far also as the *Accident* is owing to the disorderly Position of the ulcerated Limb, let it be carefully placed, so as to lie upon the level with the Trunk of the Body, by no means depending or perpendicular, which will encourage the *Fluxion*, and stir up more Pain: Thus admit the *Ulcer* affect the Leg, it is to be kept upon a Chair, or Stool, with a Pillow under, or, which may be sometimes necessary, upon, if not within the Bed, or lying on a Couch. The Arm is to be pinned up in a Napkin, as was directed for the Wounds thereof: And if the Patient be irregular in any of the *Non-naturals*, no wonder this Symptom should intervene with the Fluxion of Humours. Wherefore, that I may not multiply Words in this Particular, let the *Regimen* be taken from what we have already laid down for Persons wounded, whether as to the *Air, Exercise, Sleep, Meat and Drink, natural Evacuations and Passions of the Mind*, which have all their Influence one way or other upon ulcerated as well as wounded Patients; always observing, in the dry Habits with a hot *Intemperies*, that his Diet be rather humecting or moistening, and refrigerating or cooling.

It remains that we speak a word or two of the *Surgeon*, and his Way of Rolling, with his Applications to the *Ulcer*. Let the former, prepared of soft Cloth, (as we directed for the *Wound*) be so turned and managed as to lie easy on the grieved Place, neither so strait as to encrease the Pain, nor yet so loose as to hazard the Dressings coming off, but such as may securely retain them, beginning moderately strait from below upwards, and slackening rather upon the Sore, if so tender as not to suffer the like Compres-

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sion thereon, again straitening, as you began, when past the same, by which to repel gently, or drive back the Humours.

The last Occasion of *Pain* we observed, was that which might be owing to the too great *Heat* and *Sharpness* of the *Medicine*, discovered by the Patient's long continued Complaint after, of *Burning*, *Smart* and *great Throbbing* therein, by the angry *Aspect* of the Ulcer at the next Opening, with *Indigestion*, *Gleet* or ill-conditioned Matter, flowing in the Room of a well concocted Pus.

When the Case is thus, you are to consider if you have not too early began to *deterge* or *cicatrize*, before you are well *digested*; for that is the ready way to procure this Disturbance in the Part, and Complaints from your Patient: Or, if you find that either your *Digestive* or *Mundificative* be too hot, sharp or pungent, let the same be changed for one more mild and gentle, leaving off whatever is like to inflame or aggravate the Malady, and dressing up with Lenients; still observing, as we have hinted before, that you have due Regard to the Age and Sex, as well as Temper and Way of Living.

We now shall observe the *Intemperies*, *Cold* and *Moist*, and which accompanies other particular *Ulcers*, which are most commonly met with in the *corpulent* and *phlegmatic* Constitutions, or in those disposed to *hydropic* Distempers, attended with less Pain, as of a duller Sense, with a wan or pale Complexion, sometimes pitting round about, and abounding with crude Serosity, instead of a rightly tempered Matter; which must be treated in a quite different Method from the former, not only applying some Decoction of the hot Plants, as the *Herbæ Absinth. Centaur. Hyperic. Flor. Chamomel.*

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momel. Fol. Laur. Rorismar. or the like, with an *Elixivium* of Wood-Ashes boiled in the same, as a Fomentation, used with hot Flannels expressed; but also stronger Remedies to the *Ulcer* it self, as the *Balsam.* and sometimes the *Ol. Terebinth.* with the *Digestive*; the *Præcipit. Rub.* also not only here, but especially with the *Deterfives.* The *Sarcotics* and *Epulotics* must likewise at these Times be of the stronger sort; whilst, contrary to the former, the Diet is to consist of what is exiccating and attenuating, such as we have before directed in the *Oedema* and *Anasarca*: And lastly, the Bandage must be carried with a stricter Hand, whereby to express the Influx, and strengthen the relaxed Fibres.

We need not, I think, detain you, by reciting the *hot* and *moist*, or *cold* and *dry* Distemperatures, talked of by some, which are provided for by that general *Maxim, Contraria contrariis*: So that, having dispatched the *Pain, Fluxion* and *Intemperies*, we shall come to those other Accidents with which they are complicate, and distinguished more remarkably in their Appellations: And first among these, of the *putrid Ulcer*, after I have given you one Example of an Affect of this kind, with a *hot* and *dry Intemperies*, and excessive Pain attending.

A Gentlewoman, middle aged, of a thin *scorbutic* Habit, often subject to an *Erysipelas*, upon one or other part of her Body, was, by way of Prevention, instead of correcting the *bilious* or hot and acrid Salts in her Blood, advised to have a *Fontanel* in her Arm; which, by some Pretender to Surgery, was made too much inwards on the Body of the *Biceps*, rather than in the Interstice, between that and the *Deltoides*, as it ought.

HIST. A.

Whence immediately ensued great *Fluxion* with *Inflammation*; the *Ulcer* being so excessive painful, that after a few Days they were glad to throw out the Pea, and endeavour to heal it up again: But, proceeding irregularly, in attempting to *cicatrize* before *Digestion*, and falling still into ill Hands, the Arm swelled up, and the *Ulcer* continuing only gleeing, with extream Pain, the poor Woman could get no rest either Night or Day.

When she had passed thus thro' several Hands, for many Weeks, and apprehending Danger from her Arm, which some told her must be cut off, she came to me; who, viewing the Limb, perceived a *Sordes* on the bottom of a large *Ulcer*, which, from the compass of the Issue at first made, was now spread to the Circumference of a Crown-piece, with several other *serpiginous* Ulcerations round about; in some of which the Flesh appeared as it were worm-eaten, with the Edges hard and painful, to that degree, that she could not suffer even the finest or softest Rag, much less an armed Probe, to be laid on, in order to cleanse the same.

I told her plainly I could do her no service, without internal Medicine, that might correct the ill State of her Blood, of which I found she had no Notion, unless by the way of *Purging*, which, she said, she had taken twenty times, and was always worse after them; and truly there was less likelihood it should be otherwise, since, by what I could gather, they were generally such, as by their Heat and Acrimony excited fresh Disturbance in the Humours of her Blood, instead of carrying off or lessening the Matter therein offending, supplying a Ferment rather to the Disease.

I began her Cure by Bleeding, to derive some part thereof another way, and thereby to empty the same; also to fan as it were the remaining Mass, and cool her whole Habit of Body: Furthermore, once in four or five Days, I prescribed *Calomel.* in small quantity, as to \mathfrak{z} s. or *gr. xij.* purging off next Morning with a gentle Infusion of the *Rheubar. Sena, cum Sale Tart.* as you will find it described in the *Erysipelas*: The Days between (the Season favouring) she drank the *anti-scorbutic Juices* of the middle sort, such as were expressed from the *Fol. Tarax. Fumar. Chicor. Becab.* which did much temper and allay the bilious Effervescence and Heat of the Blood. Yet still I perceived I had not gained the Ground, that might have been expected for the Time; nor could I, for three Weeks, contrive any Remedy she could bear to lie on the usual Time of Dressing, without very great Uneasiness, and as great Complaining: The *Precipitate*, either by it self lightly strewed on, or mixed with the *Digestive*, which usually avails beyond all others, doing nothing here; the *Ulcer* lying still crude, with it *Sordes* sticking fast, notwithstanding all Endeavours. So that, suspecting some secret Taint or latent Venom of another sort, I had Thoughts of raising a gentle *Ptyalism* to subdue the same: before which I earnestly pressed for a Consultation, but it would not be granted, and indeed the very Name of *Spitting* frightened her away from me for a few Days: After which she returned however of her own Accord, telling me she was tired of her Life, and would submit to any thing that might but procure a little Ease. Upon which I immediately ordered her *gr. viij.* of *Turpetb. Min.* which worked a little roughly upwards, as I intended, for six or seven times: In the Evening of the same

Of Ulcers with Pain and Fluxion. Sect. VI.

Day she took a *Paregoric*, and lay all Night in her Bed, which she had not done for a great many before; At the same time I again strewed the *Ulcer* with *Præcipitate*, persuading her to let it lie on for two Days, over which I laid my *Digestive*, thin spread with *Basilicon*, and a third of *Liniment*. The other *Ulcers* were dressed with *Ung. Tutia*, adding a little *Merc. Dulcis*, with a view of checking their *Erosion*; and over all my *Ceratum*.

At the time appointed I took off my Pledget from the large *Ulcer*, and, as I observed before the *Gleet* to be much lessened, I now found the *Sordes* beginning to separate, some of which came off with the Digestion upon the Pledget; so that, dressing again as before, and continuing it for the same time, (a Hint I had taken long before from Mr. *Wiseman*) at the next Opening, the remaining came away in a thick *Slough*, leaving the *Ulcer* well *mundified*, or cleansed: Yet withal still so very painful, that we were forced to correct the very Air, at the Times of Dressing, with a Pan of live Coals, it being several Hours before she could sit, stand, or lie still afterwards.

The fourth Day from the first Dose she repeated the *Turpeth.* which, as before, strained her much in Vomiting; but with that Relief to her Arm, as made her sufficient amends: For the *Ulcer* kept clean, and grew less tender, the bottom beginning to incarn upon the Membranes, lying bare or in view; the Lips or Edges softer, and the *Serpigines* better conditioned, skinning over in some places from this Dressing. If we had not continued getting ground, I intended to have proceeded, at least to have made her Chaps sore with the *Turpeth. Min.* which I gave her at like distance from the second Dose, a third Time, keeping her all this while to a *Sarsa* Diet-Drink;
by

by which the Disease was so conquered, that, having incarned, we were in hopes soon after to cicatrize the same; the little ones, which appeared worm-eaten, being in a manner healed up smooth: But still I perceived the larger Ulcer so truly *dyssepulotic*, or difficult to skin over firmly, without cracking, that I much repented I had not taken the Opportunity of pursuing her Spitting when her Gums began to swell; in the place whereof I kept her to an *alterative* Electuary, with the *Æthiop. Mineral.* prescribed as follows, and a Draught of her Diet-Drink upon the same.

Rx Conf. Fr. Cynosb. ʒj. *Æthiop. Min. s. i.* ʒss. Chel. Canc. Simpl. ʒij. Syr. Dialth. q. s. m. f. Elect. de quo sumat morsulum ad magnitud. n. m. maj. mane & vesperi superbibendo ʒiv. Jusus seq. cujus bibat per se eandem dosin quart. pom.

Rx Rad. Sarsapar. Ras. Lign. Saffas. Rad. Liquirit. Sem. Coriand. a ʒss. Rud. Lapaib. acut. incis. ʒij. infunde frigide per triduum in Aq. Calcis ʒiiv. ad usum supra ordinatum.

'Till at length perceiving she grew *hæstical*, upon finishing her Cure, I put her upon a Milk-Diet, with the *Decoct. Sarsap. Edulcorans*, as directed by Fuller in his *Pharm. Extemp.* drank also with Milk, which recovered her to Admiration.

A most toilsome vexatious Work, sufficient I think to caution young Men, how they cut Issues, in some *thin, hot, and dry Habits*, without Advice: For tho' these Accidents took their rise, and the Ulcer grew so very painful at first of all, by the unartful Section of the Skin, upon the Body of the Muscle: Yet had it been made (as I have known others which have proved exceeding painful, and troublesome to get whole again) upon a proper

proper Place in the same Subject, it is questionable if it could have been continued, as may be inferred from the other corrosive, malign, and cancerous-like Exulcerations round about: For subduing which, all the mildest *Digestives* and *Detergesives* with Lenients, as the *Basilicon* with the *Præcip.* the *Unguent. Tutie*, *Diapomph.* even my *Cerate* it self, the best contrived Remedy, one of them in the Universe, and which has rarely failed me, proved ineffectual, 'till a powerful Shock was given, or a strong Revulsion made by the *Emetic*, or mercurial Vomit. A light Scratch upon her Hand, ('tis strange that thence she should admit a Cut upon her Arm) having foiled, she told me, fifteen Years before, a noted Practitioner, since dead. So exquisitely tender was this *Ulcer*, that for two Months time she would not suffer even the gentlest Turn of a Roller, her Shift and Gown-Sleeve being born up by a Contrivance, Hoop-fashion, of her own Invention. She was naturally a peevish Woman, always upon the fret, and indeed I found her the greatest Trial to my Patience I ever met with: But having, I think, unadvisedly engaged, I am sure inadvertently, and after long Fatigue, as I hoped, got the better of so stubborn a Disease, I was willing, if possible, to compleat the Undertaking.

Of a Putrid ULCER.

Of putrid
Ulcers,
with a Cold
Intempe-
ries.

WE have already taken Notice, that during *Indigestion*, as well from *Wounds* as *Ulcers*, there flows a serous or watery Humour, by Practitioners called *Ichor*; but in this particular one, by reason of the Putrifaction attending, there is farther engendered, as well at the sides, as the bottom

bottom, a more thick and viscid one, named *Sordes*; wherein, through the ill Temper of the Blood, and the Degeneracy of the nutritive Juice, or by reason of some cold and greasy Application, the same still disposing thereunto, the Flesh is as it were tainted or corrupted, and turned into a sort of *Putrilage*, or *cadaverous Rottemness*, which appears by its Insensibility, its pale and sometimes lived Complexion, with a sort of Pappiness, instead of the former Callosity about the edges, and rotten *Sloughs* at the bottom; which Description may serve for the Signs *Diagnostic*.

And as for the *Prognostic*, we cannot say that these *Ulcers* are ever absolutely free from Danger, by reason of the infirm Heat round about, and sometimes its Extinction that renders them, though less Painful, yet more liable to *Gangrene* and *Mortification*, which in *corpulent* Bodies, and especially *hydropical*, as we have before observed, they are exceeding prone to, unless great Diligence is used to prevent them. In the Cure therefore of this *Ulcer*, you are to prescribe first of all, an exact *Regimen* of Diet more particularly: Without which and your other Internals to strengthen the Native Heat of the Parts, and invigorate the same, your *Topics* will but seldom answer.

His Food in general must be prepared of Meats easily digested, rather roast than boiled, the like drying and attenuating Aliments being here required, as were directed also for the *Oedema* and *Anasarca*; it being such Habits usually, and the like abounding with *Cachexy*, or ill Humours in their Blood, that are most liable to those *Putrid Ulcers*: Also where the Heat is weak, by an over Corpulency, or much Fat, contracted by Luxury, Sloth or Idleness, too much indulging Sleep,

Sleep, and using no sort of Exercise. Or where such Heat is weakened and overcome by the drinking of spirituous Liquors. Lastly, when the nutritious Juices are soured, or otherwise vitiated, tainted, or corrupted by some *chronic* Sickness, as the *Gout*, *Scurvy*, *Pox*, *Dropfy*, &c. without mending which Habits of Body, by subduing the *Cachexy* with proper *specific Alteratives*, it will be difficult, as I observed but now, to gain upon these *Ulcers*, either by laying a good Foundation for their healing, or inducing a lasting *Cicatrix* thereupon, after they are incarnated.

Whilst then you are correcting the Distemper'd Blood and its *Dyscracy*, either by purging or altering, as the same shall indicate, let the *Ulcer*, according to the Degree of its Putrifaction or Sensation, be dressed up with the milder or stronger *digestive* or *deterfive* Remedy. If but beginning to grow putrid, having lightly strewed your *Præcip. Rub.* upon the *Sloughs*, or rotten Flesh at the bottom, and round the sides, you may lay on a thick Pledget, or, according to the Depth, soft Dossils of Lint dipped in the warm *Linim.* of *Arcaeus*, melted down with about a third part of the *Balsam Tereb.* which is much preferable at these times to the *Basilicon*, that by it self is too unctuous for these flabby and rotten *Ulcers*; or mixing equal Parts of the said *Liniment* with *Basilicon*, in which *℥ij.* of the *Præcip. Rub.* have been incorporated with *℥j.* of both so mixed: herewith your Pledgets or Dossils being first armed, and lightly moistened in some of the warm *Balsam* aforesaid, may be laid upon the *Ulcer*, with a Plaister and Compress thereon, and a Bandage, though not so straight as to intercept the Passage of the Blood, yet so as to bear gently upon

upon all Parts of the *Ulcer*, and keep off the Fluxion.

The *Ung. Apostolorum* is used by some at these times, but I think the *Præcipitate*, with your common *Digestive* as here directed, exceeds all others; which, when the *Sloughs* are thick and deep, adhering close, is to be strewed on by it self, your mixed Ointment upon your Dossils over it, and thus suffered to lie for forty eight Hours, or two Days and Nights, you will find it more effectual in digesting off the *Sordes*, than if daily shifted. At the times of dressing these moist or *putrid Ulcers*, you must take care you are never wanting of a warm discutient Fomentation, like what we have at the beginning directed for the *Pblegmon*, tending to a *Sphacelus*; with which the *Ulcer* must be diligently stuphed with hot Flannel for half an Hour. And if by such means the *Sordes* loosens, and the Putrifaction is checked, you are to proceed till your *Ulcer* is well *mundified*, and that the Flesh underneath regains its natural Colour: When leaving of your *Præcip.* thus strewed by it self, and mixing it still more sparingly with your *sarcotic Ung.* you may *incarn*, as in other *Ulcers*, with a moist *Intemperies*, we have already directed. But if, notwithstanding your former Applications, the *putrid Illuvies* still encreaseth and the *Sordes* thickens in the *Ulcer*, you must add to your *Digestive*, the *Ol. Terebinth.* it self, or the Tincture of *Myrrb* and *Aloes*, more or less, as the Sense of the Part will allow, and the Degree of Rottenness shall require; which proving still insufficient to stop the Progress, it will be-hove you to scarify, or cut into the Flesh all round, so deep as to fetch Blood, carefully avoiding the Tendons and Blood-Vessels, and to fill up your Scarifications, together with the rest of the *Ulcer*,

cer, with Dossils dipped in the scalding hot Mixture aforesaid: Then laying on a *Pledget* suited to the Compass of the *Ulcer*, armed with the *Ung. Ægyptiacum*, which is an admirable good Medicine in these Cases, and proceeding as in the *Pblegmon* tending to a *Gangrene*, we have advised: These failing, and the Part mortifying, *Amputation*, as in those desperate Cases, is the last Remedy, if the same is practicable. But when by the more powerful, whether *Digestive* or *Deterfive*, you may have put a stop to the Progress, the rotten *Sloughs* now separating, and the Flesh of its natural Colour, beginning to appear underneath; your *Præcipitate* either by it self, or mixed with the *Basilicon* and *Liniment*, as the same shall require to be *mundified* or *deterged*, spread upon the Dossils or Pledgets, and dipped in the warm *Balsam Terebinth.* may probably compass your Design; at least you must observe this for a standing Rule, that as the *Ulcer* becomes cleaner and more sensible, you must gradually lay aside your stronger *Detergents*, and proportion their Strength to the Condition of the same, I mean of the *Ulcer*; for by pursuing the stronger Medicines, when the Sore is clean, and the putrid Flesh removed, you will only inflame and aggravate the Disease.

The *Ulcer* being *deterged*, there is now room for your *Sarcotics*, which are here also required to be of the dryer sort, as the *Pulv. Myrr. Aloes, Sarcocol.* mixed along with your milder *Digestive*, or with more or less of the *Præcipitate*, as you shall find occasion.

Your *Incarnation* also being thus compleated, there remains now only a *Cicatrix* to be thereon induced, which is to be brought about by *Epulotics* of the more desiccative kind, as we have before

before recommended for *Ulcers* abounding with great Humidity.

As our last History by way of Example was taken from an *Ulcer*, the Consequence of an *Issue* made unadvisedly, and injudiciously in a hot and dry Habit, so the following will shew you the ill Effects of another, in a *phlegmatic*, or cold and moist one; both which should caution you, how you attempt the cutting of an *Issue* in some Habits of Body, even in the Arm, without good Advice and Deliberation, but more especially in the *Legs* of Women, who are very corpulent, and inclining to be *hydropical*.

One of a full Habit, *cold* and *phlegmatic*, not Hist. 2. only abounding with *pituitous* Humours in general, but *œdematous* about her Feet, and Ankles at all times, and towards Evening especially, subject to swelled *Legs*, taking rise from her frequent sipping of distilled Waters (that abominable Custom now more than ever reigning among us) by which the native Heat being weakened, and the *Fibres* rendered overlax, through the Redundancy of serous Humours; about the time of her *menstrual* Purgation leaving her, which for several Years (as is customary with some *cachectic* bloated Habits) had been irregular, complaining more than ordinarily of Pains in her Limbs, was imprudently perswaded, by her Midwife, to have an *Issue* in her *Leg*; which, for the lucre of a Shilling, was unadvisedly performed: For though made suitably enough in regard of its Situation, yet the Habit of her Body being so wretchedly vitiated, the forcing of a Pea into the new made *Wound*, and binding down the same, immediately brought on such a Flux of a sharp *Ichor*, and so enlarged the intended Boundaries thereof, that, instead of *One*, it was capable of admitting *half a dozen*

a Dozen large Peas; the Flesh about instantly corrupting and growing still more rotten: Upon which, finding there was no likelihood of reducing it to the purpose intended, a Surgeon was called in, if possible, to repair the Breach, who prudently threw out the Peas, and endeavoured to digest the Ulcer, (by the way, I think this might be so called a Day or two after it had been a Wound) yet in vain; so that after about three Weeks, I was consulted; and discovered, I cannot so properly say a *Mortification*, as a rotten putrid Ulcer, the compass of a Palm, with a gangrenous Disposition round about, from whose several Vesications, together with the Gleet from the Ulcer it self, the Bolster and Bandage came off wet, as if soaked in a bloody Water all Night.

Taking off the Dressings, to prevent the impending Danger, I immediately cut through the rotten Flesh, more than an Inch deep all round, in several places, till the Blood appeared. Had not the Limb been naturally very large, and now much encreased by the Tumefaction, I should have been cautious of going so deep with my Knife upon a Part where the *crural* Artery makes its Descent; but having done this, I ordered a strong *lixivate* Fomentation, the Surgeon had got ready, to be made boiling hot, to a Quart of which I poured four Ounces of the camphorated Spirits, setting them at work to express the *Stuphs*, and apply all round the Limb, repeating them as they grew cold, for half an Hour: In the mean time, a Panniken being brought, I directed an Ounce of *Liniment. Arcaei* to be melted down with two Drams of the *Ol. Terebinth.* and as much of the *Tinct. Myrrh.* made scalding hot; in which dipping an armed Probe, I soundly bathed all parts

parts of the *Ulcer*, with a large Pledget spread over with the *Ægyptiac*. on the outside, and a *Cataplasma* of *Tberiac Lond.* on Cloth, applied as hot as she could suffer it, all round the gartering Place below the Knee, of a Hand's breadth, covering the Vefications, and rolling on the same, I ordered her to keep in Bed; and that she should take a Morfel of the *Conf. Mitbrid.* with a Glass of generous Wine, instead of her Dram I perceived she much coveted, to warm her Blood, and keep off the *Languor* off her Spirits.

The next Day I found the *Gleet* much lessened, and, lifting out the *Doffils* with the *Forceps*, the edges of the *Ulcer* a little inflamed, as if tending to digest, at least the Putrification at a stand: when, taking up the rotten Flesh with the same Instrument, I clipped off large Pieces thereof, lying loose at the bottom, and round the sides, for the better Operation of my Medicine underneath: I then again caused the *Ulcer* to be fomented as before, and dressed up likewise after the same manner, of which I found her much more sensible than she was then.

On the third Day, the edges of the *Ulcer* gave us still much greater Incouragement, appearing with Matter, and the sharp *Ichor* less in quantity, the Tumour gently subsiding, and by turning the *putrid Sloughs* about, which were more loosened, with my Probe, I could see in some places the Flesh to appear ruddy underneath: I now clipped away more of them, afterwards fomented, and, by reason of her complaining of the Smart from her Dressings, softened the same, by adding a little more of the *Liniment*, but continued to strew on the *Præcipitate*, and dressed up otherwise as before.

The Day following I found her much heartier, with less *Stupor* on the *Leg*, and a stronger Pulse: She continued her *Mithridate* with a sup or two of mulled Wine, under the Effect of which, warming her Blood, she felt herself much comforted, by a gentle *Diaphoresis* thereby promoted as she lay in Bed. Upon opening the *Ulcer*, the *Gleet* was still farther diminished, and better *Digestion*; the *Sloughs* now separating all round, as well on the edges, as at the bottom, several of which came off with the Dressings; the Flesh although flabby lying in sight: Upon which, after I had fomented, I strewed the same thick with *Precipitate*, laying soft *Dossils* dipped in the melted Mixture, though not so hot as before, thereon; and, instead of the *Theriaca*, which there was now less occasion for, a large Pad of Tow, armed with *Liniment*, on the outside, covering the Parts which had been vesicated, as well as the whole *Ulcer* therewith; making up with a gentle Compress and suitable Bandage, somewhat streighter than at first, intending this Dressing should lie on two Days, in expectation of the better *Deterfion* from the *Precipitate*, which in some of these Cases does not so well answer sooner.

Accordingly at the time appointed I met the Surgeon, and we took off the Dressings, when the whole remaining Putrifaction came off together therewith in a large thick *Slough*, leaving the *Ulcer mundified*: However, the Flesh not yet so firm, but that more of the Powder was necessary to be strewed thereon, with the other Dressings, as at the last Opening; which being soon after corrected, and wanting only *Incarning*, I took my leave; the Surgeon finishing what remained with the *Liniment* and *Precipitate*, till the Loss of Substance

SECT. VI. Of Putrid ULCERS.

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stance was repaired, when he cicatrized with dry Lint, and a slight touch of the *Vitriol Stone*.

For the farther dispatch of her Cure, and mending her Habit of Body, at my last Visit, I recommended a drying Diet of the *Decoct. Guajac.* dry Bread or Manchet, with a few Raisins for her Breakfast and Supper, with her Meat down roasted, prepared of Flesh easily digested, for her Dinner, with a Glass of Wine; forbidding, at the Peril of her Life, any more of her strong Waters: I farther ordered her, as she grew well, a full Dose of the *Tinctura Sacra*, twice a Week, for a Month; by which she recovered a better State than she had enjoyed for twelve Months past, till, falling into an immoderate Flux of her *Menses*, her *Legs* began to swell again: Upon which she consulted me, who finding her thus flooding, and in great Danger, the same having continued for some Weeks past, I immediately ordered, for Revulsion sake, at least by deriving a contrary way, that four or five Ounces of Blood should be presently taken from her Arm, after which the following *Electuary* and *Tincture*, by which the Flux was presently moderated, and quickly after suppressed.

Rx Pulv. Cort. Peru opt. ʒj. Ter. Japon. Croci Mart. rest. a ʒij. Syr. de Meconio q. s. m. f. Elect. de quo capiat quant. n. Mosc. vja. quaque hora durante sanguinis profluvio, Et sistenti fluxu, continuetur ejus usus mane tantum ac vesperi per 7manam post singulas doses, superbibendo cochl. v vel vj. Tinct. seq.

Rx Fol. Rosar. Rub. in umbra optime ficcant. ʒss. affunde Aq. Font. fervescant ʒxij. Vini Rubri austeri itidem calefacti ʒiv. Spir. Vitr. gut. xij. stent simul ad plenam Tincturæ extractionem, cui perfecte depuratæ adde Sacchar. Cant. Alb. ʒss. m.

In regard to her swelled Legs, I would have recommended the streight Stockings, but, by reason of an *Abstima* that attended, I thought it by no means safe to suppress the Humours there, for fear of returning them upon her Breast, which was likely to be of worse Consequence; so that, directing only a *drying Diet*, I chose rather to let them take their natural Tendency to these depending Parts, than that the Lungs should be thereby farther obstructed: Neither durst I repeat the *Tinctura Sacra*, or other stimulating *Cathartic* for evacuating the *serous Illuvies*; nor yet the Bitters, for corroborating and mending the *cachectic* Condition of her Blood, for fear of exciting the *uterine Hemorrhage* afresh: So that I directed only an Infusion of the *Rad. Rhei*, to be taken once in three or four Days, as her Strength would permit, with a Morfel of the following Electuary twice a Day; on the Days intervening, drinking her *Guajac. Decoction*: By which, and the Prosecution of her *drying Diet*, she again got the better of her Disease, and remains yet free therefrom.

R \bar{c} Conf. Rosar. Rub. Absinth. Rom. \bar{a} \mathfrak{z} j. Coral. Rub. pp. Croc. Mart. rest. \bar{a} \mathfrak{z} ij. Syr. Capil. ven. q. s. m. f. Ele \bar{c} t.

R \bar{c} Cort. Lign. Guajac. Scobis ejusdem \bar{a} \mathfrak{z} ss. Rasur. Saffas. Rad. Liquir. raspat. \bar{a} \mathfrak{z} ij.

Infunde prius supra cineres calidos per xij. horas in Aq. Font. q. s. dein coquat. ad \mathfrak{t} ij. sub finem addendo Sem. Coriand. \mathfrak{z} ij. passul. maj. exacinat. no. x, & coletur pro aposemate ad usum ut supra.

Of the Corrosive ULCER.

THE next we shall observe, is the *corrosive* or *Of Corro-eating Ulcer*, of which there are diverse sorts, of five Ulcers. as many Appellations or Denominations, according to the differing Degrees of Virulency in the Humour, and the different Parts they prey upon: Thus, where the Skin only is affected, it is termed *Serpigo*, from *serpo*, to creep along; but when the Flesh underneath is also concerned, it is then named *Herpes exedens*, of which we have given an Account in our Treatise *de Morbis Cutaneis*. Where the Corrosion is still deeper, it is called *Phagadæna*, *Noma*, & *Ulcus depascens*, being Terms borrowed from its eating or devouring Faculty, as we have before observed: And these are they which in general may be named *Cacoethic*, as then we told you the Reason why so denominated, *i. e.* from their evil and perverse Disposition.

Dr. Read distinguished the principal of these, *viz.* *Noma* and *Phagadæna*, thus, the first having *Putrifaction* adjoined, but no *Tumour*; the latter, *Tumour* without *Putrifaction*. Mr. Wiseman has likewise taken notice of this Distinction, but having already described the *Putrid Ulcer*, from what follows, in that of the *Ulcus Corrosum*, proper Hints may be gathered by the Surgeon, how to treat the former, I mean the *Putrid*, when at any time accompanied with great *Erosion*.

In the Cure now of this *corrosive* and *eating Ulcer*, a very great Regard, if not the chief, is to be had to the Nature of the Humour, and Degree of its Malignity; as whether the *Bile* simply offends, or that the same, by a farther Degeneracy into a sort of *Æs Virid.* or what the Antients called *Atra Bilis*, has contracted this Predatory, and

as it were *arsenical* Property: As again it may be necessary to reflect, whether some Malignity, or Poison from without, being got into the Blood, is not then critically thrown out to the Surface of the Body; as the *Carbuncle* in the *Pest*, and the spreading eating *Ulcer* from the *Pox*. Lastly, whether or no this particular *Dyscrasy* in the Juices, supplying Matter to the Part ulcerated, arise not from some advanced *chronical* Distemper; as the *Scurvy*, whether *Acido* or *Sulphureo-saline*, the *Læpra*, or, as before, the *Lues Venerea*: Without regarding which you will in all probability miss your aim, although your local Applications are never so well adapted.

First then, if the *bilious* Humour abounds or grows outrageous, you must purge your Patient between whiles with the *chologogue* Medicine, directed for the *Erysipelas*; and when farther degenerating, those prescribed for the *Cancer*; injoining the like *Regimen*, as to the *Non-nat.* forbidding whatever may farther heat or inflame, and ordering all such, whether Food or alterative Medicine, as may attemper or soften the *bilious* and acrid Salts, offending and affording *Pabulum* or Fuel to the Disease.

Hippocrates enjoined his Patients Bread and Water at these times; but I fear some of ours would think themselves undone, if they had not Flesh and Wine allowed them.

Whilst this Abstinence is pursued, the Artist must endeavour to check the spreading of the *Ulcer*, by some suitable Application, mixing always with his *Digestive*, the *Præcip. Rub.* or strewing it upon the sides and bottom thereof; which is, I think, beyond most others serviceable, not only to correct the *Putrifaction*, but stop the *Erosion* or Spreading of the same: If the *Ulcer* submits not
hereunto,

hereunto, rather still encreasing, you must not only repeat your *Purgation*, but give *Calom.* over-night between whiles, purging it off next Morning with your former *cathartic* Medicine; and, for correcting the Virulency of the Humour, you may prescribe some proper *Alterative*, as the *Æthiop.* and *Bezoard. Min.* likewise the *Antim. Diaph.* or the *Ceruse* thereof; which, if kept to constantly, according to some celebrated Authors, is able to subdue the most inveterate *Ulcers*, and dispose them for healing. But indeed, as to this, I must own that I have given formerly large Quantities of these Preparations, without any manner of advantage from their Use; whether or no the Disappointment might not partly arise from the vile Practice of the *Chymists*, in adulterating the Medicine, I cannot say.

With these are prescribed a Decoction of the *Woods* in the nature of a *Diet*, particularly the *Sarsapar. China Saffas. Santal. cum Raf. C. C. & Eboris*; and in gross *phlegmatic* Habits, the *Decoct. Lign. Guaj.* When if altogether prove ineffectual, you must vomit your Patient two or three times, at as many Days distance, with the *Turpetb Min.* by which a more powerful Revulsion will be made, than by all other Remedies whatsoever; and the Disease, which before perhaps encreased under the strongest *digestive* or *mundificative* Application, shall after give way to one that is more mild and gentle.

There are divers Applications recommended to us by Authors, and in use among Practitioners, to overcome the *corrosive* Nature of these rebellious *Ulcers*, and put a stop to their Depredation: Those I have used are the *Lac Sublimati Corrosivi*, and the *Aqua Phagadenica*; the former, a Solution of the *corrosive Sublimate* in fair or other simple

distilled Water; the latter in *Aq. Calcis*, ℥j. 3ss, or 3j. more or less, to a Pint of the Waters, as the Age, Sex and Temper, with the Condition of the *Ulcer*, shall direct.

For this use also there are certain Powders formed into *Troches*, and from their *Founders*, borrowing the Names they are known by, as the *Troch. Andromii*, *Polyidae*, *Musæ*; also the *Pulv. sine pari Johannis Ardeni*, whose Descriptions you will meet with in *Dr. Read*, and other Writers of *Chirurgery*. The Basis of which are some *caustic* and *catheretic* Powders, as the *Vitriolum*, *Alumen*, *Æs Viridis*, and *Arsenicum*; instead of which the *Præcipit. Rub.* or *Turpethum Min. illotum*, mixed up with some *detersive* Ointment, as the *Apostol.* or *Ægyptiac.* or this latter by it self may be, I think, with more safety prescribed, and made use of with as good advantage: And where the edges fret or crack, they may be sometimes touched with the *Ol. Vitr. Sulphur. Tart. per Deliq. vel Butirum Antimonij*; when the *Erosion* is by these Means conquered and brought under, the following *Egyptiacum* of our Author's will be found useful in forwarding the Cure, for which cause I have transcribed it from his Lectures.

℞ *Fol. Card. Ben. Centaur. Min. Scordii*, ā m ss. *Mallicor. Gal. immat. Aristol. rotund.* ā ʒss. infunde calide in *Aceti fortissimi* ℥vj.

℞ *Aceti hujus colati* ℥ss. *Æruginis* ʒv. *Mel.* ʒxiv. coq. lento igne ad *Unguenti consistentiam*.

Another, for this purpose, is his *Ung. è Peto*, which, perhaps out of prejudice to the Plant, and its Abuse among us, I have not so great esteem for, as some others who mightily commend it, and frequently use it, which I have therefore here also inserted.

℞ *Axiung.*

℞ *Axung. Portin. ℥ss. Colophon. ℥iv. Cera ℥iij. Suc. de Peto ℥j. Peti contus. m. ij. coque ad Suc. consumpt. tum adde Gum. Elenni, Vernic Alb. Tereb. Ven. a ℥j. & coletur pro Unguento maxime deterfivo.*

The Unguent. *Enulat. cum Merc. Mundificat. ex Apio & Paracelsi*, with the *Præcipit. or Turpeth.* mixed up as before, are also proper for the same Intention; but not to trouble you with other *Formulae*, we shall make mention of those *Ulcers* proving *corrosive*, by reason of a particular Acrimony, or *Discreasy* of the Blood, being the Product of some radicated Distemper, as the *Leprosy, French Pox, Scurvy*: Of the first of these I have discoursed in my *Treatise of the Diseases incident to the Skin*; of the second in my *Syphilis, or practical Dissertation on the Venereal Disease*. It remains, besides what we have said of the *Scurvy*, also in the first of these, that we add a few Words here of the *Ulcer* thence arising, which is usually discovered by the *black and blue Spots*, with other *pu- Scorbatic stulary Eruptions and Blotches breaking out in other Ulcers.* Parts; as also by a *general Lassitude of the whole Body, rotten Gums, loose Teeth, stinking Breath, lixiviate and sandy Urine*; with other the *Syndrome* attending that popular Distemper: At which times you are not only to regard the *Ulcer*, as its outward Aspect shall direct, but also to inspect the *Disposition internally of the Juices offending*, and to prescribe such proper *Alteratives* as may rectify their Disorders.

Thus in the *acid, or cold, scorbutic Habits*, the hotter Remedies of this kind are to take place, such are the *Rad. Raphan. Sylv. Ari. Cort Winterani, Aurant. Fol. Cochleariæ utriusque generis, Nasturtie Aquaticæ*, and the like. In the hot, *salino-sulphureous*, the more temperate *Antiscorbutics* must have

have precedence, of which kind are the *Rad. Lapath. acut.* as excellent as most others; *Rubia Tinct. Acetos. Cichor. Taraxac. Summit. Pini Tamar. Cort. Rad. Frang. Fol. Plantag. Fumar. Aparin. Becabung. &c.* Of all which Diet-Drinks, both *alterative* and *purgative*, may be prepared; with the addition of some suitable *Cathartic*, as the *Fol. Senæ Alexandr. Rad. Jalap. Mechoacan.* Or, the Plants being bruised, their Juices may be expressed, which together this way convey their Virtues to the Blood, much better than in other Forms; several whereof, and of each kind, are to be met with in the Works of Dr. *Willis*, who hath written accurately of this Distemper; and some of which you will find inserted in our Tract *de Morbis Cutaneis*, in the third Chapter of the *Itch*.

But when all others, whether internal or external, have been experimented ineffectually, the last Refuge is usually a *mercurial Salivation*.

Of ULCERS with spongy Flesh.

Of Ulcers
with Hy-
persarcolis.

THE Ulcer opposite to the eating or *corrosive*, is that abounding with *fungous*, or spongy Flesh, by the *Græcians* named *Hypersarcolis*, an Accident as well owing to the Surgeon's Inadvertency oftentimes, as to the Nature of the Ulcer it self: For when, after *Digestion*, the same Medicaments are still continued; especially that stabby *Sarcotic*, the *Ung. Basilicon*, remarkable, above many others, for producing this luxuriant Flesh; or if any other is still applied, after the Ulcer is ready incarnated, no wonder the same should now super-abound, and rise above the level of the Skin; Nature being always ready, as we have formerly noted, to carnify the nutritious Juices flowing to the Parts,

if

if she is not hindered by some more powerful desiccating or drying Application.

When the Case so happens, and the *Fungus* is recent you may try your *Merc. Præcipit. Rub.* which we have so often commended, sprinkling thereof upon the spongy Flesh; and if laid on somewhat thick, and suffered so to lie for two Days, you will perceive the same turned into a *Slough*; which, if not coming away of it self, may be clipped off with your Scissars, or raised by the end of your *Spatula*, that you may strew on more, before the Flesh grows up again underneath: And thus daily, or every other Day, proceeding till it is reduced; when laying on a Pledget of dry Lint, or lightly rubbing the superficies with the *Alum* or *Vitriol* Stones, as were directed for the *Ulcer* with a moist *Intemperies*, you are to skin it over.

For this purpose there are sundry very drying Medicaments recommended, and very proper where the *Fungus* is mild, and scarce yet got over its brims, such as the *Pulv. Gallarum immat. Boli Veri, Ter. Sigil. Croc. Mart. rest. Lapid. Tutie Calaminaris.*

Among Vegetables, a strong Decoction of the foresaid *Gallæ*, the *Rad. Bistort. Torment. Fol. Ros. Plantag. Equiset. Centinod. Cortex Querc. Granat. Flor. Balaust.*

In these Decoctions made with the *Aq. Fab.* for the more potent *Desiccation*, may be dissolved a Bit of *Alum* or *Vitriol*, when *Pledgets* expressed herefrom are laid down upon the spongy or luxuriating Flesh: But if the same prove stubborn, and give not way hereto, a *catheretic*, or perhaps *caustic* Medicine, may be required; such as the Powders of crude *Alum* or *Vitriol*, or the former calcined, and then mixed with the *red Præcipitate*, improperly

improperly, I think, now called *Pulvis Angelicus*: Also the *Calx Viva* is a good Remedy at these times, and still more powerful when made into a Paste, with the *Lixivium Capit.* The strongest is the *Lapis infern.* prepared, as formerly shewn, out of the said *Lixivium*.

The *corrosive Sublimate*, and the several *Arsenics*, I have no opinion of; and therefore cannot recommend them, for Reasons formerly observed.

For this purpose also, there are many prepared *Lints*, the Cloth being either dipped in some of the foresaid Liquors, or *stiptic Decoctions*, or in a Solution of the *aluminous* or *vitriolate Salts*; afterwards hung up to dry, and then scraped out into *Lint*; or the *Lint* it self steeped therein, and dried for Use. One of these *Fallopis* has presented us; but by reason of the *Sublimate* therein, upon which the principal Efficacy depends, I shall wave the Transcript thereof.

I have frequently cut out my slips of Linnen-Cloth worn fit for the purpose, and dissolving about a Dram of the *Roman Vitriol*, called by the Surgeons *Lapis Caelestis*, in four Ounces of spring Water, have thoroughly wetted them therein, and, gently expressing the Liquor, hung them up in the shade to dry, after, as I had occasion, scraping them out into *Lint*.

But observe in the use of these sharp and biting Medicines, you must at all times regard your Patient's Age, Sex, and Habit of Body, for that Remedy which is but mildly *detergsive* in some rustic Bodies, will be found a *Catheretic* in young Infants and Children; where the gentlest also of these last, will prove here an *Escharotic* or *Cautistic*; but to proceed.

In old or inveterate *Ulcers*, accompanied with this Accident, where the same is grown obdu-
rate

rate, especially if Malignity is suspected, this way by *Caustic* will be too hazardous, in exciting Pain, as also tedious; wherefore the Knife or *actual Caутery* will be the most effectual to suppress the farther growth, and level the excrescing *Fungus*, as we observed, when discoursing of the *Sarcoma*: And after the removal of the *Eschar*, or before the *Ulcer* is again filled up, the surface may be dried by the *Vitriol* or *Alum Stones*, if the *Lint*, prepared as above-mentioned, prove insufficient.

But where you have reason to be jealous of a *Cancer*, to be inferred from its *horrid Aspect*, *livid Complexion*, *turgid Vessels round about*, *Inequality in its Surface*, *Induration or great Hardness*, *sprouting Fungi*, like the Heads of the *Colly-flower*, and withal cutting or darting Pains quite through, frequently returning, *fetid or stinking Gleets*, with *Hæmorrhage*, as were observed in our account of that terrible Disease at the end of our first Section. Observe what we have there advised, and be just both to your Patient and your own Reputation, by an honest *Prognostic*: That is, having apprized him of the Danger, do what you can to palliate and make him easy, if you concern your self at all; but meddle now with no *Corrosives*, nor deceive him with a vain hope of Cure.

And thus much of *Ulcers with fungous Flesh*, concerning which, it may be farther necessary I should acquaint you, that during your local Applications to the same, the Habit of your Patient's Body is likewise to be considered, and where there is *Plethora*, large and repeated Bleeding will be requisite, together with a spare Diet: The former to empty the Vessels, and keep under any feverish Effervescence, kindled in the Mass of Blood, by reason of a sharp and painful Remedy,

dy, made use of to waste the *Hyperfarcosis*; the latter to abate from the Nourishment of the Parts in general, and prevent the too great Afflux of the nutritious Juice to this in particular, which would supply still farther Materials to the Disease.

If the Body be *Cacochymic*, *Purgation* must also be directed at proper intervals, by which not only the noxious, but the superfluous alimentary Humours will be exonerated.

Compression and *strict Bandage*, especially after the *Fungus* is taken down, are here also of absolute necessity to suppress the rising of new Flesh, and keep what is risen upon an equality with the edges of the *Ulcer*, in order to *cicatrizate* from the same: And Note, that during the use of *catheretic*, *septic*, or *caustic* Medicines to destroy the superfluous Flesh, a *Digestive* is to be applied over the outside, that may hasten off the *Sloughs* thereby occasioned.

It were needless, I think, to give Instances either of this or the foregoing, which are every where so exceeding common, that scarce a *Fontanel* but shews us an Example of this last, especially in moist Bodies, or a simple *Ulcer* with Pain and Fluxion, in the hot and dry of the first: So that, avoiding all I can, being too prolix, the *Ulcer* we shall next take notice of, is that with *Callous Lips*.

Of Callous ULCERS.

Ulcers
with Cal-
lous Lips.

THIS Accident is very common to *Ulcers* of long Continuance, and in others of a shorter it is sometimes promoted, by the too early use of *desiccative* Medicines, before the Digestion is accomplished, or the *incarnating* of the *Ulcer* rightly

ly compleated: Whence the Juices flowing to the Part, which should be turned into Matter, or converted into new Flesh, being, by those means stopped about the sides and brim of the *Ulcer*, indurate thereupon, and, having more of the same supply, stagnating as it were round about, the *Callosity* is increased, and the Lips farther thickened, by which the Cure of the *Ulcer* is obstructed, and rendered impossible; till the said *Callus* is softened, and way made for the imprisoned Humour to come forth and fill up the Cavity: Or, being implete with sound Flesh, to shoot forth from the Edges, and as it were *Crystallize* into a new Skin that may cover the surface thereof.

Wherefore it is evident, that the prime or chief Intention in the cure of these *Ulcers*, is first of all to soften or relax the indurated Edges or Lips thereof, which you may attempt by some *emollient Decoction*, as a *Fomentation*; also by *Cataplasms*, *Emplasters*, or *Embrocations*, the former may be prepared, *ex Rad. Alb. Bryon. Lil. Fol. Alb. Malv. Verbasc. Parietar. Mercurialis, Branc. Ursin, &c.* with the Liquor of which after the use of the *Fotus*, a *Pultis* may be made by thickening with the *Puko. Flor. Chamom. Sambuc. Melilot. Sem. Lini ac Fœnugr.* or the *Magma* of the Decoction being well bruised and pulped, may be applied in the same Form.

Emplasters for this purpose are those *de Mucilagin. cum Ammoniaco Solut.* or that *ex Ammoniaco* by it self.

Liniments or *Oils* are the *Ung. Dialib. Ol. Lil. Lumbric. ex. Pedibus Ovil.* also the *Axungia's*, as the *Porcina, Anserina*, and beyond them all, in the Opinion of some, the *Humana*.

But we have less reason to multiply Remedies for this end, since what we have formerly delivered

vered concerning the *Schirrus*, may be transferred hither, being equally serviceable in these Cases.

If the *Callus* is so firm, hard and cicatrized about the Edges, that the Pores of the little Tubes are thereby as it were locked up, the same is either to be rubbed off with a *Cautic*, or cut away with the Knife; afterwards afresh digesting the *Ulcer* with the *Basilicon* and *Præcipitate*, and continuing still, for the farther relaxing and setting open the Pores, the use of your emollient Applications round about. When having repaired the lost Substance, if there was any to fill up, the remaining Inequality upon the Lips, common to these *Ulcers*, may be sometimes levelled by *Plaister-Compress* upon the prominent Parts, assisted by a strict *Bandage*, especially the *laced Stocking* or *Arm-piece*, which may bring the Parts protuberating to fall in, and, by the help of your *Epu-lotic* to cicatrize smooth and even with the rest.

This way of cutting off the callous Lips of *Ulcers*, as well as burning, was not only customary with *Severinus*, by some called *crudelis Chirurgus* or the severe Surgeon; but is recommended also by *Sennertus*, and even *Galen* prefers that way of Extirpation by the Knife, to the *Escharotic*, being much easier to the Patient, and less subject to intervening Accidents, if safely situate.

The *Septics* or *Cautics* for this use, may be taken from what we just above delivered, concerning the *Ulcer* with *Hyperfarcosis*, where the Edges are raw; the milder may be first experimented, such as the *Ung. Apostol.* or *Ægyptiac.* mixed with some cathartic Powders, as the *Merc. Præcip. Rub. Turpeth. Min. illotum, Pulv. Angelicus*, or the like, more or less, as the *Callus* happens to be confirmed, and according to the Strength and
Habit

Habit of Body also: But if the Lips are skinned over, they will bear yet stronger Remedies, as the *velvet Caustic*, the *Butter of Antimony*; nay the *Lapis Infernalis* itself, or the strongest Soap-Lees boiled up to a Stone, as we have described the same at the beginning, or in our first *Section*, to be rubbed round the *callous Lips*, 'till they are sufficiently excoriated; after which, and the *Sloughs* thereby occasioned separated and cast off, the others, a degree milder, may now very probably suffice to consume the remaining Hardness.

It has been customary with some Practitioners (and I have used them myself formerly) to apply the *arsenical* and *sublimate Troches*, either powdered and mixed up with a *Digestive*, or in a Paste, like the *Troch. de Minio*, shaping the same to, and covering the Edges all round therewith: But I have already, from my own and others Observations of bad Accidents, sometimes ensuing these Applications, shewed my dislike of such Compositions; nor can I see any necessity of calling them into common Use, when we have others less hazardous, that will perform our Work: So that leaving you to select such, as may be with more safety enterprized, from those we have here, and in other Places, recited, I shall proceed to the *sinuous* and *fistulous Ulcer*. When I have given you one History of a *Gallous* one, and farther acquainted you, that at these times also, the Patient is between whiles to be purged with some suitable *Cathartic*, in which *Calomel*, if nothing forbids, is always to be an Ingredient, as the most potent Remedy to incide and attenuate the viscous Humour any where impacted in the Body: The Diet likewise is to be such as affords good Juice, and is easily digested, while the whole physical *Regimen* is prescribed with a

view of perspiring the stagnant Juices, and re-ferating the Tubes therewith obstructed, as we formerly observed concerning the *Scbirrus*; and farther taking regard, that whilst you are using these sharp corroding Medicines, to the Lips of the *Ulcer*, the Parts about are well defended by some *anodyne* Restraining, or repelling Application, whether Plaister, or lenient Embrocation, as we mentioned at the beginning of this present *Section*, when discoursing of the Fluxion attending those *Ulcers*, complicate with great Pain and a hot and dry Distemperature.

HIST. 3. A Person middle aged, of a *bilious*, thin Temperament, from scratching a *Pustule*, on the outside of his Leg, had the same gradually improved into an *Herpes exedens*, or a fretful *Ulcer*, the Compass of an Hand's breadth, with high and pouting Lips all round, but hollow, and withal unequal in the midst: In order to the Cure whereof he had undergone much Pain, through the *sublimate*, *aluminous*, and *vitriolic* Washes, made use of by several *empirical* Undertakers, in hopes of drying it up, neither regarding the *Digestion* of the *Ulcer*, nor correcting the malign Disposition of the Humours, by proper internal Remedies; from whence a sharp *Ichor* only flowed, and that in great quantity, the edges grew *Callous*, and the *Ulcer* so excessive painful, that he could take no rest.

In this wretched Condition he sent for me, after he had thus languished for two Years and upwards: And truly upon the first taking off the Rollers, wet with a stinking *Gleet*, and the frightful appearance of the Sore underneath, *crude*, *hard*, *unequal* and *painful*, I was suspicious of a *Cancer*; 'till enquiring farther into the Case, and the Method of their late Treatment, I had better hopes:

Yet

SECT. VI. Of Callous ULCERS.

51

Yet at best, perceiving it like to be a Work of time, I recommended the *Hospital*, as the easiest way of Relief, for a Person who I thought otherwise incapable of getting the same. But this it seems was an Affront, and, under some Resentment, he told me, if I could cure him, as mean as he appeared, he would give me ten Pounds, and had a Friend, upon occasion, that would advance for him so much more. I told him, it was never my way to warrant the Cure of a cut Finger, much less so stubborn a Malady as he laboured under, that being fit only for *Quacks* and other *impudent Pretenders*; But I did believe his Cure might be accomplished, and, if he put himself under my Care, I would use my utmost endeavour for the same; wondring indeed, that a Person who had twenty Pounds to ascertain for Satisfaction, should have applied to these *vile Impostors*, who had almost ruined him.

The next Day a Person came from him, who made me such an Offer, as was agreeable; and I immediately began the Cure, by rubbing the Lips of this large *Ulcer* with the *lunar Caustic*, which was several Minutes before it entered or discoloured the same; the rest of the *Ulcer* I covered over with *Præcipit. Rub.* and a Pledget of the *Basilicon Flavum*, rolling up the Leg.

There were several small rotten *Ulcers*, or deep Holes in other Parts thereof, in each of which lay a *putrid Slough*, the Edges in like manner indurated, by means of those harsh and drying Applications, which had been here also applied, these I dressed up after the same manner.

The next Day after application of the *Caustic*, and the Use of the *Præcipitate*, I perceived the *Gleet* much abated, with a small tendency to *Digestion*; the Patient assuring me, that after, two

or three Hours from the dressing, the Smart going off, he had more Ease than in many Months before, and was able to lye in his Bed, without rising in the Night, which he had not done of a long time.

In those Parts of the Brims where the *Caustic* had made Impression, in order to thicken the *Eschar*, and penetrate deeper, I dipped the end of my Probe in the *Butirum Antimonij*, and lacquered it all round as it were of a Silver Colour, the other Parts, where it had not made any, I lightly excoriated with a touch of the *Lapis Infern.* then sprinkling on more of the *Præcipit.* applied the *Digestive* over all the other small ones, dressing each with a suitable Dossil dipped in warm *Liniment*; first shaking on a little of the same Powder, with an outside Pledget of the *Digestive*, rolling up again as at first.

Thus, in about ten Days time, the *Sloughs* digesting out of these small *Ulcers*, they were soon after *mundified*, and grew easy, the Edges softening and in good forwardness towards healing. But those of the large one were more stubborn and rebellious, being likely to prove a Work of longer time. However being *digested*, as the *Sloughs* upon the Brims, occasioned by the *Butter* of *Antimony* cast off, I renewed the same, or the *lunar Caustic*, gradually as he could bear it, till I had wasted a great part of the Prominence round about, embrocating the inflamed Parts with a little *Ung. Sambucin*, and confining my Patient for the most part to his Bed, without which Engagement, I would never have undertaken the Work; for hereby the Fluxion was kept off, and the Tumour, which when I began was very considerable, from the Knee to the Toes was in a manner totally subdued.

When

When I had thus digested the *Ulcer*, I put him upon taking the alterative *Electuary*, with the *Æthiops*, the medicated *Aq. Calc.* as directed in the eating *Ulcer* with great Pain; likewise *Calomel.* between whiles, with the *Rheubarb Infusion* the next Morning to purge off: As thus,

R̄ *Calomel.* ʒj. *Conf. Francast.* ʒss. m. f. *Bolus sero vesperi sumendus.*

R̄ *Rad. Rbei. tenuiter incis.* ʒj. *Fol. Senæ* ʒij. *Sem. Coriand. p.* 1. *Sal. Tart.* ʒj. *infunde in Aq. Bullientis q. f. pro Collaturæ* ʒiij. *in qua solve Mannæ opt.* ʒj. & f. *potio leniens cathartica pro seq. mane repetatur Bolus Mercurialis & potio lenitiva semel in septimana pro ro. vicibus.*

Nevertheless such was the inveterate Nature of the Humour, and the stubbornness of the Brims, that, though I had lain them almost upon the level, they would not skin, but rather sprout up again, even before the casting off the *Eschar*, remaining still *cancerous*, jagged and unequal; the Flesh likewise in the middle no longer clean or florid, than the *Præcipitate* was continued: So that perceiving the slow Progress made for some Weeks past, and fearing I should be foiled in this way of proceeding, I proposed the laying of a flat Cautery lightly, and only once, upon the callous brims of the *Ulcer*, and that we have tried to subdue their stubborn, malign Quality; but my Patient would not hear of it, beginning to be uneasy, as I was my self.

The *Ulcer* was yet too painful for the streight *Stocking*, which I had got ready for him, and had laced on once very gently, but he could not bear it.

About this time I was called in upon an antient Gentleman, who had formerly been chief Surgeon

of an Hospital-Ship, to consult upon a *venereal* Case then under his Care; and, in some talk of *cancerous* and *callous Ulcers*, he told me he had an infallible Cerate for dissolving the same, which I understood was an *Opodeldoch* like that of *Wurtz*, only made a little softer than our Dispensatory *Empl.* of that Name, of which he presented me with a Gally-pot; and I tried it upon our *Ulcer*, as I had done the *de Ranis de Mercurio*, and a Quick-silver Liniment before that: But I could perceive little ground gained hereby, more than the former; so that, for making some great Effort by way of Revulsion, and for his speedier Relief, I ordered eight Grains of *Turpeth. Min.* in a Bolus, which worked, as he called it, *doggedly*, that is roughly; but which I persuaded him was the fittest Remedy for a *dogged* Disease. Two Days after this I perceived a sensible Amendment, and so did my Patient, being much easier and freer from Pain; the *Ulcer* milder, better digested, as well as the Flesh of better Colour, and the Brims more tractable, the little *Ulcers* presently after *cicatrizing*.

I still continued the *Præcipitate* with the *Digestive*, and silvered the Edges were they lay yet high and uneven, with the *Butirum Antimon.*

The fourth Day after I gave him nine Grains of the *Turpeth.* which strained him as before, vomiting him ten or a dozen times: The next Day he grew so easy that I got on the streight Stocking, lacing gently that he might be the better pleased with it at first, and streightening gradually every Day.

The second after the last Vomit I perceived him slavering, complaining of the soreness of his Chaps, and that he could eat no Victuals; and looking into his Mouth, I found some *Sloughs* beginning to fix on the Inside of one of his Cheeks,

his

his Gums swelled, and his Breath stinking. Wherefore taking the opportunity, and concealing my Intention, I ordered a proper *Regimen* of thin Broths and Grewels, muffling up his Jaws with Flannel tacked up to his Cap, and repeated the *Turpetb.* the third time; so that, his Mouth growing still forer, a *Salivation* came on, when I encouraged him with hopes of a speedy Cure therefrom: And indeed he was the better reconciled after a few Days, perceiving, as the Sores in his Mouth and his Spitting increased, that in his Leg healed, with a little *Præcipitate* now mixed with the *Digestive* for the middle, and my *Cerate* on the outside; by the help of which, and the streight Stocking, the edges softening and lying smooth, we daily gained ground, and before his Spitting, which lasted twenty one Days, was at the height, the *Ulcer*, from the breadth of a Palm, was drawn into the compass of a Half-Crown; When, by the help of dry Lint, with the *Cerate* over it, his Cure was compleated at the Month's end, from the first Dose of the *Turp.* in which time we made greater Progress than in two before, or than we were likely in two or three more without this Revulsion, which rendered this malign *Ulcer* so mild and tractable, that, as in the Case of other *cancrous* ones from a *venereal* Taint, (tho' here was no room to suspect any thing of such nature) we could see at each dressing a manifest Progress to the Cure.

After this I purged him three or four times at proper Intervals, kept him some time after to his *Sassa* Drink, and enjoining him to the continuance of his laced Stocking, secured him from Relapse.

Of Sinuous ULCERS.

Of Sinuous
Ulcers.

WE are now come to the *Sinuous*, and here, I think, I need not tell you, that an *Ulcer* is so called, when, besides the common Cavity, (if there be loss of Substance) some farther Hollowness, either strait or winding, is discoverable upon Search with the Probe, under the Skin or muscular Flesh, wherein Matter is lodged; and whereby, altho' you have incarnated, or filled up that common Cavity with Flesh, and brought the same to a *Cicatrix*; yet are you as far as ever from a Cure, by reason of the said Matter nesting itself in that *Sinuosity*, or Passage out of sight.

These are commonly the effect of some *Abscess*, or *Apostemation* gathered and broken, where the Matter having insinuated between the Interstices of the Muscles, if seated on the fleshy Parts, or into the Cavities of the Joints, when near unto the same, and after the Discharge, although the visible Hollowness, which contained great part of the said matter, unites or otherways heals up; yet that, from the *Sinus* inconspicuous, still continues from some Orifice on the outside leading to the same, retarding the healing up of the *Ulcer*, and at sometimes rendering it very difficult, if not impossible.

In order to the Cure whereof, when you have discovered what way the *Sinus* runs, if recent and well situate for the purpose, you are first to fit a Plaister-Compress, as we have formerly directed, to the length and breadth thereof, endeavouring, by good *Bandage* over, to express the contained Matter, and unite the Hollowness, which, if not of too long standing, and superficial withal, is frequently brought about hereby: But this proving ineffectual or impracticable, you are to try,
if

if, by making a Vent or Opening in the lower or more depending part of the *Sinus*, you cannot hereby drain off the Humour, and unite the remainder, as we took notice in the *Pblegmon* suppurated; and as is practised in the milky *Abscesses* of Women's Breasts, by which you may sometimes save your Patient much Pain, and hazard also ensuing the cutting through the whole Cavity, where the Nerves, Tendons or Arteries lye in the way.

But if this cannot be done, as in *Sinus's* running deep into the Joints, among the tendinous Parts, the large Blood-vessels, also into the Cavities of the Breast or Belly; or unsuccessful, as in *Ulcers* of long continuance, where the Parts underneath are all tainted and corrupted by the Virulency of the Matter; At such times, I say, there will be wanting a sound Judgment and Circumspection; for although, in the superficial *Sinuosity*, that lies clear of those Dangers, you may boldly enter the Shank of your Probe-scissars, and snip them up at once; yet in those profound and intricate, or winding, having also more Cavities than one, which is very frequent, you will see the necessity of that Knowledge in *Anatomy*, the Study whereof I have so earnestly advised you to, at the conclusion of my fourth *Section*; by which you may be instructed where the *Rocks* and *Shallows* lie, and where you may safely *steer* the Course of your Knife, without *wrecking* your Patient's Limb, or Life, or your own Credit and Reputation.

It was this Knowledge, Gentlemen, that many Years ago, before *Anatomy* was arrived at the perfection it is at present, which made that bold Practitioner *Severinus*, so famed for Cures, by others passing for *incurable*; and by which he made himself farther noted for that of a *sinuous Ulcer*, in the

the *Perinæum* of the Son of the King of Fez, where two *Ulcers* at some distance were found to communicate by one common *Sinus*, which he undertook and laid open, and also cured, after all the greatest Artists in that Kingdom had pronounced the same, through Ignorance, 'tis to be supposed, in the anatomical Dissection, as absolutely incurable: But, returning;

In the farther Management of these *sinuous Ulcers*, whether penetrating the Joints or other Cavities of the Body, and thereby rendered incapable of throwing open, you may take those proper Hints for your Direction, which we have before, in our last, laid down for Wounds penetrating those Parts, wherein we have told you the main stress was laid upon the internal Prescription, to temper and soften the Juices of the Blood, and dispose the parts within for Consolidation: And in those *Sinus*'s, although not penetrating the inward Cavities, yet, by reason of danger from some Tendon or Artery in the way, less capable of being dilated, having in vain tried to compass your design by Compression and good Bandage, where the Parts will admit thereof, as in Wounds; so likewise here it is proposed we should make use of *Injections*, taking care the Limb be so placed, as may afford a ready Passage out again for the same; for fathering whereof, if you should think fit to make experiment, I would advise you, as some others have cautioned, to let the external Orifice remain open at the time of throwing in the Liquor, by no means stopping or keeping it in with your Finger, or Pipe, that fills up the entrance.

To this purpose, after *Digestion*, in order to *mundify*, *Decoctions* may be prepared *ex Fol. Hyper. Centaur. Marrub. Chelydom. Absinth. Agrimon. Apit. Rad. Aristol. Enul.* fewer or more; in which, according

cording to the degree of Putrifaction, are to be dissolved *Mel Ros. cum Tinct. Myrrh. vel. Flos Ung. Ægyptiac.* $\mathfrak{z}\text{ij}$. of the first $\mathfrak{z}\text{ss}$. of the second with $\mathfrak{z}\text{ij}$. of the last to lbj . of the *Decoction* streined.

After *Deterfion*, in order to agglutinate, your *Injection* is to be prepared *ex Rad. Sympbiti, Torment. Bistort. Fol. Plantag. Equiset. Cort. Querc. Granat.* to which are added the fine Powders of *Myrrh. Sarcocol. Aloes, Thus,* together with the said *Mel*; and, where greater Desiccation is required, the *Aq. Calcis cum Syrupo de Rosis siccis*; likewise a Solution of the *Lap Medicam.*

During the use of these, which I must confess I was never fond of, as believing, without the help of *Bandage*, little good would come thereof, the Patient must be kept strictly to a *Decoction* of the *Woods*; among which, in the cold and phlegmatic Constitution, the *Guajacum* takes place; but in the hot and dry, the same must be left out. To these may be added, at the close of the *Decoction*, one or more of the agglutinative Plants, or those called *Vulnerary*, observed in our Discourse of Wounds, to which we refer for avoiding Repetitions. The Patient is also sometimes to be purged with *Calomelanos*. Nor shall I think it needful to give Instances of these *Ulcers*, which are so very common, that scarce one *Abscess* happens which does not furnish some Example hereof,

Of FISTULÆ.

WHEN the Sinuous Ulcer therefore has been of long continuance, and, not only in its outward Orifice, but through the whole Cavity thereof, has contracted a *Callosity*, it then changeth its Name for that of *Fistula*; in whose Cure, as in the last, you are duly to weigh the place of its Situation, to what Parts reaching, and what may happen

happen to lie in your way, should you enterprize the Dilatation; all which considered and found safe, yet, contrary to the former, you have generally something yet to do, I mean the wasting or consuming of the *Callus*, which has hardened their Cavities as it were into so many *Pipes*, and from whence they have derived their Name of *Fistula*: For it is chiefly this Circumstance that renders these *Ulcers* more difficult of Cure than the former; and which were so rarely accomplished by the Antients, at least in these Parts, that even, within one Century past, the Cures of this nature were accounted *Miracles*: And it was very remarkable, in one of your Fraternity, then living in *Tower-street*, by name *Boovy*, who, as Dr. *Read* gives us to understand, had written over his Door, (doubtless in Gold Letters) *Here liveth one that can cure a Fistula*.

The Seat of these *Fistula* is very commonly some *Emunctory* of the Body, such as the *Groin* or *Armpit*; also the *Joints*, with the Cavities of the *Breast* and *Belly*, many of whose Cures are only what we call *palliative*, that is, according to some, proceeding by the way of *mundifying* and *agglutinating Injections*, where the Passage for the same out again can be secured, which, in those especially not penetrating the Trunk of the Body, may be with greater safety enterprized, as we directed but now for the *sinuous Ulcer*; or depending wholly, as in those which do so penetrate, upon the *traumatic* and *balsamic* Remedies directed internally, whilst the outward Orifice of the *Ulcer* is kept open as a *Fontanel*, in the manner described for the penetrating Wounds of the same Parts.

The *Anus* is also subject to this Disease, which if the recent Production of a *Phyma*, or an apostemated *Hæmorrhoid*, and not extending its Hollow-
ness

ness beyond the command of the Finger in *Ano*, is with less difficulty cured, either by the *Ligament* or *Incision*; but if of long standing, or grown *callous* through its whole Cavity, the Trouble will be found much greater: Likewise, if it lie out of reach, or pass its Matter from above the *Sphincter*, there will be hazard, more especially in elderly Persons, by cutting through the orbicular Fibres of the same, of the Stools passing involuntarily afterwards. Why this part, more than some others, happens to be liable to this Disease, is laid down by Mr. *Wiseman*; as also by that able *Anatomist* Mr. *Cowper*, from the Structure of the Part, and the Mechanism of the Blood-vessels, particularly the *hæmorrhoidal Vein*, as you will find in his Description of the said Blood-vessels, communicated to the *R. S. vid. Philos. Transf. abridged*, Vol. IV. p. 137. But, proceeding,

For the Cure of a confirmed *Fistula*, or, which is the same, a *sinuous Ulcer* grown *callous*, there are several *Catheretics* used to waste the said Hardness, or Pipe-like nature of their Cavities, and in divers Forms, the Basis of which are the *Alumen*, *Vitriolum*, *Merc. Sublim. Corros. Auripigm. Calx. Viva*, *Æs Ust. Merc. Præcip. Rub. Turpeth. Min. Alb. seu illat. Butir. Antimon.* several Forms of which you have in the famed *Troches* of *Andronius*, *Polyda*, *Musa*, *Johannes Arden.* which, being powdered, are made into a sort of Paste with some *Unguent.* as the *Ung. Apostol. Fuscum, seu Ægyptiac. mundif. ex Apio*, with which Tents of sufficient length and bigness are armed, and rolled round in some more of the said Powders, when they are introduced into the Cavity.

Some dissolve these Powders in Liquors, and then inject them; but this I think a Practice not fit to be imitated, not only on account of the
Pain

Pain and Uncertainty of their coming out, as either too soon or not soon enough; but, for that of their unequal or disproportionate Operation, whilst they destroy more than is needful, being shut up in some winding or depending *Sinus*, and leaving others in a manner untouched, that lie higher above them.

In rustic Bodies, where the Pipe is small, out of the way of any nervous Parts, notwithstanding my Prejudice against the *Sublimate*, I have yet ventured to waste the *Callosity* with a *Troch.* of *Minium*, rolled up Tent-Fashion, which I should not have cared to use upon others. This being left in for a few Days, with a *Digestive* on the outside, comes away with the *Callus* sticking round in the Shape of a thick *Slough*.

The Form of which *Troches*, as I have used them my self, I shall here give you.

℞ *Medul. Panis Alb.* ʒss. *Merc. Sublim. Corros.* ʒi. *Minij* ʒss. *Aq. Rosar q. s. ut ex omnibus permixtis formetur Pasta, ex qua fiant Placentule vel Trochisci ac Rotule, in umbra ad usum exiccanda.*

Where I have been fearful of these, I have sometimes rolled out a Bit of the *velvet Caustic*, suited to the Cavity, and hastened the *digesting* out the same, with the *Eschar* thereby occasioned.

The *Pulvis Angelicus* may be prepared in like manner *cum Micapanis*, as were the *Minium Troches*, and rolled out into divers lengths and sizes against occasion offers.

Others, lastly, for the same purpose make use of the *medicated Candle*, prepared throughout its whole length, as it is used to consume the *Caruncles* in the *Virga*, though somewhat stronger for

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for a *Callosity* confirmed by time, a Form of which you will meet with in my *Syphilis*.

The *Callus* being thus destroyed, and the *Ulcer digested*, you are now to set about the Cure, either by the *mundifying Sarcotic*, or *agglutinating Decoctions* above prescribed, where you cannot come with your Knife to dilate the *Sinuosity*: Or where you can, if the same lies deep or thick, as we said in our Discourse of *Abscesses* thus terminating, you may have some Advantage, by farther enlarging or widening the said Cavity, with a Tent prepared of *Gentian Root*, or a Piece of Sponge fitted for that purpose, which being entered the *Sinus*, and imbibing the Humidity thereof, will in few Hours distend itself, and enlarge the same to more than twice its former Dimensions, even at as many times using; whereby in few Days you may not only make more room for your Instrument, but so thin the Parts, as to render the dividing much easier to your Scissars, and less painful to the Patient.

For this end you are to pick out the pithy and soft Roots, or, being dry, to make them so, by laying them in a moist or damp Place; as a Cellar, where they will soon become fit for Use.

The *Sponge-Tent* is, I think, well known to be prepared out of Slices of the common Sponge, before-hand washed and cleared of any fabulous Contents, then dried, and afterwards dipped in the hot *Melilot-Plaister*, when it is immediately placed between the flat Plates of a juicing Press, and there squeezed close; after this, being thoroughly cold, it is taken out and laid by for this occasion; when it is cut into such lengths, and of such capacity, as to fill up the hollow of the *Ulcer* to be enlarged. And thus I shall finish

finish what I intended to deliver concerning this particular *Ulcer*, after an Instance or two of some of them, and exhorting you to remember that, before you enterprize these Operations (at which you should have always present some able senior Assistant) you are not only to prepare your Patient's Body before-hand by *Bleeding* and suitable *Purgation*, one or both, as the Circumstances may indicate; but to see also, as well sometime before, as after, that he observe the strictest *Regimen*; for which, and where such Help is to be had, it behoves you likewise to call for the Advice of a Physician, who may direct such proper *Alteratives* and farther Remedies, as may rectify or mend the present corrupt State of the Humours or Juices; lest otherwise the purulent Particles being now shut up in the Vessels, a *beetle* Flame should be inkindled, and the Patient thereby have just Cause to date his greater Misfortune from the Day of his *Chirurgic* Cure: Which Cases are not uncommon; and happy were it for these unhappy People, that they would content themselves with their weeping *Fistula*, unless they became the Physician's Patient before they enter on their Cure by *Surgery*.

HIST. 4. A person of middle Age, full Habit, and free Living, being seized with an inflammatory Fever, of the *pleuritic* Kind, attended with a dry Cough, little or no Expectoration, great Thirst, Oppression on his Breast, and restless; after ten Days Attendance by his *Apothecary*, the Case in a manner desperate, notwithstanding repeated Bleedings at the beginning, a Tumour shewed it self on the outside, above the *Diaphragm*, at some Distance from the *Spine*; upon which account I was called in, and pronounced the same a critical Translation from within; to forward the advance

advance whereof, I advised a *Cataplasm* of the *Fici Pingues*, *Rad. Lil. Alb. Alth. Sem. Lini ac Fanugr.* as for the *Pblegmon*, that way tending, has been mentioned formerly; by the Repetition of which in a Week more, the Tumour advancing rose high and prominent, and the Matter began to fluctuate underneath: Whereupon, with all convenient Speed, to prevent a Rupture thereof into the Cavity on the Inside, I laid a *Caustic* towards the bottom of the Rising, and returning in an Hour's time, pierced the *Eschar*, whence there flowed forth a large Quantity of a greenish ill-scented *Pus*.

After which I dressed up the *Ulcer* with a Pledget of *Basilicon*, a Plaister, light Compress, and *Bandage*, being a Child's Roller of fit length, round the Trunk of his Body: But the same Evening I was called to renew my Applications, the Discharge still continuing, and fouling of the Bed in a surprizing Manner; the Patient through the Greatness of the same, together with the putrid Stench, often fainting away; and indeed, when I came to see the Condition he was in, it seemed as if the whole Cavity of the Chest had been a Pond of Matter, issuing forth this Rivulet I had made for its Discharge.

Dressing up again as before, and shifting his Linnen I ordered him a comfortable *Julap* for the Support of his Spirits, with some *volatile Drops* therein; also *Hungary Water* as an *Epithem* for his Forehead, Temples, but more especially his Nostrils; and farther, that they should burn somewhat frequently in the Chamber, that might in some measure overcome the Scent.

The next Day, being provided of an *elixivate Fotus*, with some *camphorated Spirits* put therein, I took off the foul Cloaths, and, having or-

dered the Parts round about to be cleaned, applied *Stupbs* expressed hot out of the same, as the Condition of the Part allowed.

The Discharge still continued in greater quantity than could have been expected, and withal extremely foetid, insomuch that I was deliberating once, whether or no an *Injection* prepared from a Decoction of some *Vulnerary*, as the *Summit. Centaur. Hyperic. Scabiosæ Agrimonie*, and the like, with a little *Tinct. Myrr. & Mel Ros.* might not be useful in *deterging*, or at least correcting the Putrifaction: But the Fear, of the same not venting together with the Matter, restrained me, (as it had done several times before,) especially when I reflected upon two or three Cases where I was called in, and where I had reason to surmise the like Practice, instead of helping, had done much Harm. So that continuing my Fomentation, and dressing after the manner I began, till the *Eschar* separated, the same now lessened daily; when forming a Tent armed with Thread for its Extraction, and dipping it in the warm *Bals. Tereb.* with a little *Tinctura Myrrhe*, I passed it down to the bottom of the *Ulcer*, the rest being filled up with Dossils dipped also in the same Mixture, a Pledget of *Liniment* externally, and the Bolster with Bandage as before.

Upon Discharge of the Matter, the *symptomatic* Fever went off, but the *hectic* ensued in its place, or rather a *putrid Intermittent*, with returning Flushings in the Cheeks, accordingly as the *Exacerbation* and *Remission* of the same came on: His Cough was now more *humoural*, having a Mixture of the same Matter as was discharged by the *Ulcer*, his breathing still *anhelous*, and *colliquative* Sweats so soon as ever he fell into his Sleep; all which coming upon a Subject, especially

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ally who, by hard drinking, had near spoiled before an excellent Frame of Body, could presage but little likelihood of a Recovery: However, to obviate all we could his present Symptoms, I directed a *balsamic Eleſtuary*, with a *vulnerary Decoction*, as an *Apoſem*, to be drank therewith, also a *Linētus*, and a *Pearl Julap*.

Rx *Conf. Roſ. Fruēt. Cynosb. ā ʒj. Baſf. Lucatel. ʒſſ. Pulv. Haly recent. pp. ʒij. Syr. de Sympbito q. ſ. ut f. Eleēt. cujus capiat q. n. m. ter. in die boris med. cum ʒiv. Apoſematis infraſcripti ſuperbauſtis.*

Rx *Rad. de Sympbito ʒi. Bellidis cūm toto m j. Fol. Scabioſ. Agrim. Heder. Ter. Capil. Ven Summit. Hyperic. ā m. ſſ. Rad. Liquirit. ʒij. Coque leniter in Aq. Font. q. ſ. ad ʒiij. colaturæ cui perfectē depuratæ per ſubſidentiam adde Ap. Limac. Mag. ʒſſ. Syr. Baſf. Tolut. ʒij. m. f. Apoſem.*

Rx *Ol. Lini rec. ſ. i. extr. ʒij. Syr. Papav. Rhæad. ʒj. Syr. Baſf. Tolut. ʒſſ. Sperm. Ceti ʒiſſ. m. exquifite præ Linētū, de quo cochlear. capiat urgente Tuſſi vel Phlegmate opprimentī.*

Rx *Aq. Laēt. Ceraſ. Nigr. ā ʒv. Cinnamon. Hord. Pæon. C. ā ʒij. Coral. Rub. pp. Margarit. pp. ā ʒj. Succh. Cryſtal. q. ſ. m. f. Julapium; cujus (pbiala prius agitata) ſumat cochl. tria vel quatuor in languore Spirituum, præcipue ſudoribus obrutus.*

After ſome time, though my Patient ſeemed to get ground, yet finding the Diſcharge too great to allow of ſhutting up the Ulcer, when, by Compreſs round about, I had united the Sinuosity externally among the Muſcles, and fitted the ſame for it, I paſſed in a Cannula, by which the Matter by degrees drained off; and, after ſome

Weeks, by means of the *testaceous* Remedies with a *Milk-Diet*, a *medicated Aq. Calcis* instead of his *traumatic Aposem*, Milk also and a *China Decocti- on*, as here follows, his Blood was softened, and the hectic Flame in a manner extinguished; so that he daily got ground and recruited in Flesh, when, the Matter ceasing to flow longer forth, the *Cannula* was extracted, and the Orifice admitted to heal up: Since which, living more regularly than formerly, he has enjoyed a State of Health beyond Expectation, being grown bulky again as before, but liable to a Cough upon the least intercepted Perspiration, or, as they call it, *catching Cold*, subject also between whiles to an Inflammation of those Parts, which, however, has been kept under hitherto by free and timely ventilating the Blood, by *Phlebotomy* or *Venæsection*.

*Rx Rad. Sarsaparil. Chinæ incis. ā ʒij. Ras. Sas-
saf. ʒij. infunde prius in Aq. Calcis tenui cali-
facta ℥vi. per xii horas, dein coquantur ad me-
dias, sub finem addendo Capil. Ven. Santicul.
Pulmonar. ā m. ss. Colaturæ claræ adde Syr. Balf.
Tolut. ʒjss. & f. Aposema dequo bibat ʒiv. primo
mane, quarta pom. & ultimo vesperi.*

*Rx Conf. Rosar. ʒj. Spec. Diatrag. fr. ʒij. Cbel.
Canc. simpl. Coral. Rub. pp. ā ʒj. Syr. Capil. Ven.
q. s. m. f. Elect. cujus capiat quant. n. mosc. mane
& vesperi, superbib. ℥ss. Apof. seq. cujus eandem
capiat quantitatem per se quarta pom. cum ter-
tia parte Lactis Vaccin. admistam.*

*Rx Chinæ Nodos. tenuiter incis. ʒij. Caul. Angelice
ac Rad. Eryngij condit. ā ʒj. Rasur. Ebor. &
C. C. ā ʒss. coq. in Aq. Font. q. s. pro Colaturæ
℥ij. quæ perfecte clara per subsidentiam, reser-
vetur ad usum supra ordinatum.*

Nor must I pretermitt what, I think, had very considerable Share in this remarkable Recovery; I mean the *Bals. Sulph. Anis.* of which each Night, for a Month together, that is, succeeding, he took eight or ten Drops lying down to rest, in a Spoonful of the following Mixture, and to which he still has Recourse, with great Benefit, when he finds himself stopped up by Cold.

Rx Syr. de Sympbito Bals. Tolut. Capil. Ven. & Aq. Cinnamon. Hord. ā ʒj. m.

This Balsam is wonderfully extolled by *Sylvius*, as is the *Terebinthinate* one by some others, for the Cure of internal *Ulcers*, as well of the Lungs as other Parts.

Indeed in the true *Phthisis*, or pulmonary Consumption, where some *Tubercles*, inflaming and apostemating, have formed *Ulcers*, I have been fearful of administering these *Balsams*, as well as the natural one of *Peru* and *Gilead*, by reason of their great Heat: Yet want we not *Faouters* of this Practice among our modern Physicians of note also. Thus *Dr. Gibbons*, in the last Stage of this Disease, where true *Pus* is daily spit up, gives frequently the *Gilead Balsam* to ʒj. twice a-day: The like Practice was espoused by *Dr. Cade*, together with a Course of the *Testacea*, and the *Ass's Milk*, or *China* Decoctions at proper intervals; but I will give you another Instance of these *Ulcers*.

A Girl of about ten Years of Age, having, for five or six Days past, laboured under a *Peripneumony*, at least that Disease complicated with an Inflammation on the *Pleura*; for want of timely and plentiful Evacuation by Bleeding, was reduced, when I was sent for, to the State of a dying Person, breathing with the greatest Difficul-

ty, or *Orthopnoical*, as Physicians call it, *i. e.* unable to respire, unless sitting upright, a settled or fixed Colour in her Cheeks, with a hard Pulse, and dry Cough, the extream Parts in a manner cold: Whence making a *Prognostic* of the utmost Danger, either by the bursting of an *Abscess* inwardly, or making its way through the Branches of the *Trachea* into the *Bronchus*, and that way hazarding a Suffocation, I immediately ordered her to be let Blood; but through the Difficulty thereof, no Blood being this way to be drawn off, I directed a cupping Glass to be set upon the pained part of her Side, and Blood thence extracted by Scarification; which I had more than once found successful, in Cases of the most imminent Danger of the like kind, directed by Sir R——d B——r. A Vesicatory was likewise ordered for the Neck, and the following oily Draught every four Hours for four times; also six Spoonfuls of the *Apossem* drank warm between whiles.

R̄ Ol. Lini rec. ℥j. Syr. Papal. Rbead. ℥ss. m. f. haustus.

R̄ Decoct. Peſtor. depurat. ℥j. Fimi. Equin. ℥ij. infunde simul & filtretur per chartam, addendo Ol. Nuc. Mosc. gut. ij. f. Aposema.

The next Day Matters seemed at a stand; no Expectoration or Alleviation of Symptoms: She had taken only two of the oily Draughts, and drank but little of the Infusion, her stomach turning, she said, against them; Wherefore, finding her obstinate, and the Parents foolishly indulgent, not pressing what was necessary; I was about leaving them to their own way, not thinking she could survive another Night; yet, considering farther of the matter, and they promising,

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If I could order any thing that was not an oily Medicine, they would persuade her, I directed thus :

Rx *Aq. Cinnam. Hord. ℥ij. Oxymel. Scyllit. ℥ss. f. mixtura, cujus sumat cochlear. subinde superbibendo cochlear. quatuor. Emulsionis sequentis.*

Rx *Sperm. Ceti ℥ij. Sacchar. Albi ℥ss. solve cum Ovi Vitello, & gradatim affundendo Aq. Cardui ℥xij. f. instar Emulsionis, tempore usus vitrum agitando.*

After this, promising I should hear from them the next day, and not sending me any notice, I concluded she was dead; till about a Week after that I was sent for, to take a view of a Swelling upon the Ribs on the outside. Whence I apprehended there was an Adhesion of the Membrane of the Lungs to the *Pleura*, and that *Nature* was now busy in forming an *Empiema*, by way of Translation to the external Parts: I was the rather suspicious of this *mala confirmatio*, as knowing the Child always subject to a Cough, and difficult Respiration upon any Motion extraordinary, or any little cold she had taken.

She still continued in her upright Posture, stealing a slumber between whiles, her Colour in her Cheeks as formerly, but otherwise a ghastly Countenance; labouring in her Breath, and drowned as it were in Sweats, which yet were rather hot than cold, and taking very little Food or Medicines; so that the whole being as it were committed to Nature; for the farthering her Endeavours in this desperate Effort, I ordered a dry Cup to be laid on, after which a *Cataplasma* of the *Sem. Lini* & *Fenugr. Fici ac Rad. Lil.* to be boiled, pulped and applied to the Part.

The next Day the Tumour was much advanced, began to inflame, and rise higher in a Cone, inso-much that the third after, I prepared a piece of *Caustic* of the *Lap. Infern. cum Tantillo Saponis*, and, fitting a Perforation in a bit of Plaister, applied the same, leaving it on all Night, and the next Morning penetrated the *Eschar*, whence issued near a Pint of foetid Matter, like the foregoing: After which the Child found such sensible Relief in her Breathing, that she was able to lie down in her Bed, and slept all the following Day and Night, waking like a Person transformed, or with new Life.

The Day following, passing my Instrument through the *Eschar*, which I had dressed up with a *Digestive*, after discharge of the Matter that would then run freely out, I found a Passage between the fifth and sixth Rib, reckoning from below, into the Cavity of the *Thorax*, or the *apostemated* Lobe of the Lungs on the same side.

The discharge daily lessening, though there still flowed great quantity between the times of Dressing: I made my *Prognostic*, that altho' the Symptoms all abated upon letting forth the Matter; yet there was no small danger of a *Fistula* being left behind, that might drain away her Strength, tho' more leisurely in the way of a *Consumption*; for confirmation of which, I procured a Consultation with Mr. *Blundel*; where it was agreed, that, so soon as the *Ulcer* was fit for the same, if the Matter still continued to vent it self from within, a Pipe should be introduced: In the mean time, the *Eschar* being cast off, I sprinkled the *Præcipitate* on the spongy Flesh on the outside, passing a Tent of Lint fastened with Thread, dipped in the warm *Liniment* of *Arcaus*, into the Perforation, a little way rolled in the same Powder,

der, neither yet so large, but that the Matter had a free Passage betwixt the times of Dressing: Over this a Pledget of the same *Liniment*, a soft Bolster and Bandage round about. I purposely here also forbore the use of any Injection, for the Reasons I have already given before, chusing rather to commit the whole of the internal Ulcer to Nature's Industry, assisted by proper *Vulneraries* and *Balsamics*, than to interfere with such as, however suited for to cleanse or heal, were attended with uncertainty of finding their way out again.

Among the former were the *Sarsa Decoction*, prepared as in our last History, with a small *Aq. Calcis*; adding also the *Fol. Tussilag. Heder. Capil. Ven.* Also *Electuaries* and *Eclegma's*, with the *Consi. Rad. de Symphito, Rosar. Spec. Diatrag. fr. Coral. Rub. Margarit.* the *Syr. Balf. Tolut. Capil. Ven.* and the like.

But, the Cough and Hætic still continuing, we changed this *Regimen*. For our last Refuge the *Ass's Milk*, and *absorbent Powders*, in the manner here inserted:

℞ *Margarit. Coral. Rub. Spec. Diatrag. fr. pp. a*
℥ss. m. f. Pulvis, sumendus in cochleari Lactis
Asini, superbibendo ℥ro. ejusdem.

Repetatur mane matutino, superdormiendo, & quint.
pm. quotidie.

℞ *Syr. Balf. Tolut. Dialib. de Meconio, Aq. Cinnam. Hord. ā ℥j. f. mixtura, cujus capiat cochl.*
unum vel duo prout Tussis postulat, eadem magis
infestante.

The Matter still flowing from the Ulcer, especially upon withdrawing the Tent, that the same might not be pent in, I now fitted the Orifice with a *Cannula*, and a Plaister snipped in the middle, to give way to the Corruption issuing through

through the Pipe, which being secured by the Roller, I gave Directions to their Servant to inspect the same daily; and, as often as there was occasion, I promised to overlook them: At the same time I recommended their carrying her three or four Miles into the Country, to prosecute this last Prescription of the Powders and Milk, in a more clear and wholesome Air. When, after a Week or ten Days time, all things went on with a Success beyond Expectation, the Child to Admiration recovering her Appetite, and therewith her Flesh; and the Discharge so lessen'd, that they concluded upon throwing out the Pipe, which began to be somewhat troublesome: But, finding Difficulty therein, they brought her up to Town; when, going to draw out the *Canula*, I perceived that, by neglecting the Directions I had given, for turning it about once in two or three Days, and taking it out to clean, the Perforations therein were filled up with Flesh shooting from the sides of the *Ulcer*; so that it was not without a little force, and a small Effusion of Blood, that I could myself disentangle the same: Which being done, I dressed up with a thick Pledget of dry Lint for the present, to stay the Bleeding. The day after, coming to examine the Orifice with my Probe, I perceived the lower edge of the *Costa* bared, either by the corrosive Quality of the Matter, or the Pipe rubbing against the same; and which I was therefore forced to make way to, and to dress with a small Dossil tied round the middle, moistened with the *Tincture* of *Myrrh*, and a little *Mel Rosar.* by which the Work, which I thought now as good as finished, was hereby protracted for five or six Weeks longer; at the end of which, a small Shiver coming away, the dry Lint compleated the Cure with a firm *Cicatrix*: The Patient

Patient being alive at the Writing hereof, a Woman grown, yet subject to a *Dyspnea*, and a Cough, especially if she stays here in Town.

From these two Histories, with many the like to be met with, I think, Gentlemen, we may fairly deduce the following Inferences by way of *Corollary*.

1. That *Ulcers* of the *Lungs* indefinitely, or without distinction, are not *incurable*: For in both these, as well as others of the like kind occurring daily in Practice, 'tis evidently these Parts were ulcerated. The Case indeed is full of Danger in either way of the Abscess breaking; for if, gathering more in the inward Substance or Body of the Lungs, it bursteth suddenly into the large Branches of the *Trachea*, or into the *Bronchus*, as happens often in the Distemper of this Part, called the *Vomica*, the Patient may be instantly suffocated; as on the other, Death may be as certain, though in the more lingering way of the *Phthisis*: I mean where the Abscess is formed nearer to the outward Surface of the same Parts, and breaking through their investing Membrane, falls down upon the *Diaphragm*; where, if Nature is not strong enough to make a way for venting the said Matter externally, as in the foregoing Cases, and other *Empiema*'s, it must communicate its Taint, and, rising a *putrid, hectic Fever*, end in a *Marasmus*. Though even here we want not Instances of her conservatory Care for the Animal, licking up as it were this fluctuating Matter back again, and discharging it by what Physicians call *Anacatharsis*, or Expectoration, or imbibing the same by the Mouths of the Blood-Vessels, and unloading it into the *Pelvis* of the Kidney, to be conveyed

*Ulcers of
the Lungs
distinguish-
ed.*

veyed thence with the Urine into the Bladder, as I was once a Witness of.

2. That it behoves us to difference this *Abscess* and the aforesaid *Vomica*, which is a Collection of Matter involoped in a *Cystis*, of several Months, some Authors say Years, standing, without Cough or Fever; where, being gradually congested, it at length breaks through its Bag, into the Passage of the Wind-pipe, unawares to the Patient, who is often thereby strangled as it were in a moment; which if he has the good hap to escape, the Matter being thus emptied, the Patient oftentimes recovers.

Valerius Maximus recites a very singular Case of this nature, in his *first Book* and *sixth Chap.* concerning a Recovery by a Stab into the Breast; which was intended for the Person's Death, but luckily made way for his Escape, by the Discharge of a *Vomica*, his Physicians knew not what to make of, nor could do any good with.

Fernelius, Lib. 5. Ch. 10. and *Forastus*, Obs. 51. Lib. 15. mention two extraordinary Histories of this Disease; which is discoursed also by *Jacotius*, *Severinus*, *Balduinus*, *Sculetus*, and sundry others, Antients as well as Moderns.

Paschalius, Lib. 1. Ch. 20. has well remarked the Way of opening the *Thorax*, in the *Empiema*; as also has *Tulpius*, Lib. 2. Ch. 5.

The most remarkable of this kind, that I have met with, was very lately in Mr. Page, a Brewer at Bow, who in one Night's time, upon the bursting of the *Cystis*, or Bag containing it, spit up above a Quart of Pus, so foetid, that it was exceeding troublesome to bear the Chamber, though but for a few Minutes: This Discharge continued for many Days, much the same for Quantity,

ty, as well as Stench and Putrification, obliging him to keep upright, and almost incessantly pumping, as it were, Night and Day, with little or no rest, under the most imminent Danger; as Dr. Hulse, who was called into Consultation with me, can testify. Yet, notwithstanding the most formidable Symptoms, by the help of *oily Draughts*, and *Eclegma's*, *expectorating Mixtures*, with *Oxymel*, *Sperma Ceti Emulsions*, *pectoral Aposems*, *Sarsa* and *China Decoctions*, *Solutions* of the *Balsam of Tolu* in *Vitel. Ov.* and lastly, the *plentiful Use* of *Ass's Milk*: The Discharge at length ceasing, he has surmounted the Disease, appearing again abroad, to the Astonishment of his Acquaintance, as also his Physicians.

But our *Abscess* is a very *acute* Disease, of the *inflammatory* Kind, attended with a *Fever*, a *hard Pulse*, *dry Cough*, *high Colour* in the *Cheeks*, and *great Streightness* of the *Præcordia*: Or indeed it may be called, what in reality it is, a *Phlegmon* of the *Lungs* and *Pleura*, which, if not taken off in a *Week* or *ten Days* time, by repeated and large *Bleeding*, or the *Lungs* freed therefrom in a plentiful and easy *Expectoration*; an *Abscess*, as in other *Parts*, is formed, which, sometimes bursting, falls into the *Cavity* of the *Chest*, as we have above described, and raiseth a *Tumour* on the outside, whereby *Nature*, solicitous as well for the *Preservation* of the *Individuum*, as at other times of the *Species*, finds away for an *Escape*.

Hippocrates has limited this Matter to fourteen Days, in this *Apborism* of his, *Qui pleuritici, facti, non repurgantur superne in quatuordecem diebus, his in suppurationem convertitur*: But this, I think, will scarce hold absolutely with us; much less his forty Days in the following, *Qui ex pleuritide suppurati sunt, si intra quadraginta dies, ex quo ruptio fuerit facta,*

facta, repurgentur superne, liberantur; si vero minus, ad tabem transeunt.

To countenance this *Aphorism*, as dwelling on the Infallibility thereof, Dr. R. Morton has dressed up a formal Tale in his Treatise *de Phtibisi*, of a *peripneumonic* Case in a young Lad, where he depended so much on this *Dies quadragesimus*, that he ordered an *emetic* Mixture of *Oxymel* to be got ready against the time appointed; and, I think, for the better gloss to the Story, he should have been in the way himself: However it seems he came in the nick of time, and, giving it by Spoonfuls, brought up a large quantity of Matter, which well nigh strangled the Patient, who notwithstanding was thus, as it were, miraculously *ex orci faucibus ereptus*.

Upon this *Aphorism* our ingenious *Lifter* thus comments:

Hujus transitionis ratio apud nos, quod scio, rarissima est; nempe istæ suppurationes diuturnæ ex morbo laterali, si vomica non fuerint, ac valde frequentes fuerunt in Græcia. So that although with this Gentlemen I can say, *Hippocrati fidem do, cum de iis mentionem fecerit, haud ita tamen Mortono, quia raro aut nunquam evenere nobiscum.*

Dr. Morton, its plain, was too much wedded to *Hypothesis*, to give a just or faithful Register of Physic, an Instance sufficient of this we have, in that Opinion he had taken up of a *venenum spiritibus implicitum*, by which he was led into the most pernicious Error of exhibiting the hottest and most fiery *Alexipharmics*, such as the *Tberiaca Mithridat. Electuarium ex ovo Rad. Serpentar.* and the like, in the inflammatory Fevers; which oftentimes required a more temperate, if not a cooling *Regimen*, and doing, much more Mischief, doubtless by the extream *hot*, than Sydenham by the *cold* one.

The

The like Mistakes he must inevitably run into, through his beloved fondness of the *Bark*, which he had carried to that length, that, laying aside the *Alexipbarmics* or *Diaphoretics*, of all kinds; how opposite soever the Genius of the *Fever* might be thereto; yet if there appeared, as he expresseth himself, *velut umbra remissionis*, the *Bark* was thrown in, contrary to the daily Observations of Mischiefs sometimes thence arising, before the Signs of Concoction in the Urine, and the irreparable Hazard of many Lives destroyed thereby; notwithstanding his Collection of Cases, which he has drawn up to justify a Practice condemned by almost the whole Faculty; but in general the most learned and most experienced of the present Age.

So strangely overseen are sometimes learned Men, to abuse even the best of Medicines for the sake of an *Hypothesis*, of which I have thought fit, Gentlemen, to give you this Intimation, that others, by the Example of so great a Man, may not be led into a Mistake of that important Consequence to the Lives of our Fellow-Citizens.

3. We are to distinguish between *Ulcers* of the Lungs arising suddenly, from an *acute*, inflammatory Disorder in the Blood, as aforesaid, turning to *Apostemations*; which, being discharged in the manner we have been discoursing, are sometimes cured; and those appearing in the way of Congestion after a *chronical* Illness, as the *Scurvy*, *King's Evil*, also the drying up of old Sores, &c. whence the *secondary* or *symptomatical* Consumption of the Lungs ensues; Tubercles being first of all formed therein, which sooner or later, according to the way of the Patient's Living, and the Disposition of the Humours thereunto, inflame and turn to Matter; whence their vesicular Substance being
farther

farther corroded, *Ulcers* are here produced, and Matter truly *purulent* spit up, which happens generally in the last Stage of a *pulmonary Phtisis*, and for the most part bidding a Defiance to our Art, as well through the continual Motion of the Parts, as the Impossibility of a Medicament, either *deterfive*, *sarcotic*, or *epulotic*, coming at the same with that full Energy or Force, as to others within the outward reach thereof; but now proceeding.

We have already observed to you, that the *Anus* is very often the Seat of these *Fistule* and *sinuous Ulcers*, of which having given you an Example or two, we shall hasten to those complicate with *Varices*.

HIST. 6.

A Gentleman middle aged, subject to the *Hæmorrhoids*, but otherwise of a good Habit of Body, coming off a Journey, in which he had heat and bruised these Parts, began to complain of great Pain and Throbbing on his Buttock, some distance from the *Anus*, which he neglecting, either by Bleeding, *anodyne* or discutient Applications, Temperance, and lying by, to avert the Fluxion, but drinking as usual, and walking about as long as he was able, after a Week's time sent for me; who, upon Examination, found a great Hardness upon the Muscles of the Buttock, with an Inflammation stretching towards the *Anus*, Matter, though deep, seeming to fluctuate: Wherefore to encourage the Suppuration, there being now no other way of helping him, I ordered the *Cataplasm* of Figs, and Lilly-Roots, boiled in Milk, intending the next day to have opened it by *Caustic*: But asking my opinion of the Nature of the Malady, and receiving Answer that it would prove *Fistulous*, he could by no means believe that, he said, because it was so far

far off the Fundament: However, the Pultis was applied, and by the next Morning the Matter had burst through: Upon which he sent me Word I need not trouble my self, for his Swelling was no more than a common *Boil*, and, being broke, he was perfectly easy; nothing doubting but a *Salve* they had in the House would finish the Cure.

I was no ways concerned at this Message, as little questioning but he would find himself mistaken: For though the Body of the Tumour lay somewhat distant from the *Anus*, yet, the Inflammation extending up to the same, it was very suspicious that the Matter passed from within the *Intestine* first of all; there being so great Inflammation upon the Neck of the Bladder, also by consent of Parts, in that, for some Days past, he was in extream Misery, being under a continual *Tenesmus* of this Part; as well as of the Fundament, and scarce able to render a spoonful of Water but in great Pain; for easing him wherein, I had the Night before directed him as follows:

Rx Pulv. Ocul. Canc. Simpl. Sal. Prunel. Sacchar. Alb. à ʒj. m. f. pulvis in tres chartulas dividendus, quarum unam solve in Haustulo Emulsionis sequentis, & repetatur quartaquaque hora.

Rx Sem. Luctuæ & Papav. Alb. à ʒss. Amygd. d. excort. no. vij. contusis affunde Aq. Hord. (in qua ʒss. Gum. Arabic. fuerit soluta) Hiss, & Colaturæ adde Aq. Cinnamon. Hord. Syr. de Alb. à ʒj. m.

An emollient Clyster was likewise thrown up to procure a Stool, which he had not had for some Days past.

But these Symptoms vanishing upon the Discharge of the Matter, he concluded himself out

of all Danger: 'Till having tried his *Family Salve* for some Weeks, and the Matter still continuing, an old Woman was consulted, who tented the Orifice, and that way promised to make a Cure in a short time, although with as little Success.

When several Months had thus passed, he threw out the Tent, and contented himself with his former Salve on the outside like a Plaister, 'till, by the Discharge and trouble of Dressing, being tired, and seeing no end of the Work this way, he came one Morning to my House, and acknowledging his Simplicity in entertaining so wrong a Notion of his Case, desired my Assistance.

Upon a view of the Disease I perceived, that by length of time, and the drying Waters in which the Tents had been dipped, not only the outward Orifice, but through its whole Passage, from the Buttock towards the *Anus*, the *Sinus* which ran that way, was now grown *callous* or *pipye*; so that, before I could lay it open with any advantage, there was a necessity of wasting the *Callosity*: In order to which, having prepared his Body for the Work, I came one Evening, and introduced a *Troch.* of *Minium*, or rather a Tent of the same, of sufficient length and thickness, with a digestive and an adhesive Plaister on the outside, also the T-Bandage for security thereof.

The next Morning I perceived him somewhat feverish, thirsty, and, through the Pain it had given him, he had been all Night restless, although now much abated: However, to take off the Fluxion, I let him Blood, threw up an emollient Clyster, and directed an *Emulsion*, to abate the Inflammation, and temperate the

Heat

Heat of his Blood, like that I had formerly prescribed: And renewing the Digestive, I perceived the Tent surrounded with a thick *Slough* like a Plug, which after a few Days thrust out together therewith.

The *Callosity* thus removed, and the *Ulcer* digested with *Basilicon* on a Tent of Lint rolled over with the *Præcipitate*, I made a farther Enquiry with my Probe, and having satisfied my self in its Course, when I had somewhat thinned that Part, by the *Gentian-Root*, with a strong shanked Probe-Scissars, I cut through the *Sinus*, which yet was very thick, to the Verge of the *Anus*; filling up the Incision, on account of the *Hæmorrhage*, with dry Dossils, a *Digestive* on the outside, and the *Bandage* as at first, confining him now to his Bed.

This Wound being likewise digested with the Dossils, made up softer, dipped in the warm *Linniment* of *Arceus*, and in a hopeful forwardness of *Incarning*; there being still a great supply of Matter, I was confirmed in the Suspicion I had from the first entertained, that the Source of this Mischief was still out of sight, and that the Matter originally formed in the Coats of the Gut, by falling down lower on the Muscles of the Buttock, had raised the *Abscess*: For satisfying my self wherein, the *Ulcer*, as I said but now, healing daily towards the Fundament, I passed my Probe up, whence the Matter came down, between the Tunics of the Intestine, whilst my Forefinger of the other Hand was introduced by the *Anus*, as high up as I could reach, with which I could plainly feel the Probe on the other side: so that, having incarned the Wound upon the Buttock; and fitted it for a Pledget of dry Lint, in order to cicatrize, I proposed the dilating

of this *Sinus* by the *Intestine*; or that otherwise he must content himself, though not with an Issue on his Buttock as formerly, yet with a constant Drain by the side of his Fundament; which I gave him a few Days to consider of, whilst we were healing of the other Wound.

He was indeed very desirous of being well, but difficultly persuaded to another cutting, preferring the *Ligature*, which he had been informed would supply the Place: But when I told him that Method was much more tedious, and full out as painful, as being liable to worse Accidents from the Fluxion; and that before I could pierce the *Intestine*, and draw forth a crooked Probe with the said *Ligature*, in order to make the Stricture by the Tye, I might in the other way have the Work dispatched at once: He acquiesced, and the day following, provided for the Work, I entered the one Shank of my Scissars by the Orifice, with my Finger guiding the other *in Ano*, and having got up as high as it would reach, I drew forth my Finger, and at one Stroke laid open the Cavity: But perceiving, as I was about the Work, the Scissars giving way upon their first Gripe, at the Verge of the *Anus*, I was fearful I had not reached the extent of the *Sinus*: Wherefore passing up again my Finger, I felt a forked Partition, letting in the top thereof like the Finger of a Glove: Upon which, unknown to my Patient, who thought I was forcing in my Dressing, I thrust up a Scoop, I had by me, made for the Work, almost like one of those the Cheesemongers make use of for their Tasters, with which, distending the Intestine on the opposite side, I strait re-entered my Scissars, and snipped open that Partition to the upper end thereof; then clapping in my dry Dossils hard rolled

rolled up, to prevent the re-union of the fresh divided Lips, with a Compress of Tow on the outside, and the customary Bandage, I dressed up, directing an *anodyne* Draught, *ex Aq. Cinnamon.* *Hord.* $\frac{3}{4}$ ss. *Syr. de Meconio* $\frac{3}{4}$ ss. *Conf. Frac. f. m.* $\frac{3}{4}$ j. not only to quiet the Pain, but to prevent his too suddenly going to stool, which his Body was very prone to; also the *Decoct. Alb.* for his Drink upon the same occasion.

The next Day, extracting the Dossils, I perceived a fair Wound, into which once more gently passing my Finger, oiled for its easier entrance, I found that Work compleat; when dipping a Probe-Tent, of suitable Proportion to the Wound, in the warm *Liniment*, I introduced it with a Pledget and Bolster, and dressed up again: After which, being well digested, to prevent any spongy Flesh, I continued the same dressing rolled in the *Præcipitatè*, gradually shortening the Tent, leaving always one ready armed, with Instructions to his Wife how to apply it, in case of his going to Stool in my absence. And thus, in less than a Month, finished his Cure; during the greatest part of which, as well as for some time after, I advised him to an *Aq. Calcis* medicated with the *Woods*, that might correct the *acrid scorbutic* Salts in his Blood, and prevent any Mischief thence arising, together with the shutting up of his *Fistula*; and, in some measure to compensate for the same, a *Fontanel* was placed in his Leg, which he still continues, as he surmises, with great advantage to his Health.

But it often happens that the *Fistule*, more especially of this Part, are so perplexed in their *Sinus*'s, or so intricately winding like *Burrows* under Ground, that, having laid open one, there are others still discoverable, which discour-

sage the Patient, and render the Cure difficult: Of which Kind, though not to the degree of some about which I have been consulted, was the following.

HIST. 7. A *Carpenter* in my Neighbourhood, of a corpulent or full Habit, having for some Days been ill of a Fever, under the Care of that worthy good Man, Dr. *Brooks*, by a Translocation of the febril Matter, a Tumour was raised on his Buttock, in the same Place as the foregoing, at some distance from the *Anus*; which inflaming, soon after suppurated, and was opened by *Caustic*.

The ill Habit of his Body, and the Site of the Tumour bordering so near the Fundament, by an Induration reaching the same, and lying deep under the Flesh, gave me reason to suspect a *sinuous Ulcer*, if not an incurable *Fistula*, might happen to be left behind; and therefore I was the more shy in giving great Encouragement, or promising a Cure.

Having let out a large quantity of Matter well enough concocted, I made a slight Enquiry by the Probe, and found a deep Cavity under the *Gluteus*, running downwards on the back part of the Thigh, with another tranverse to the *Anus*, both taking up almost the whole length of my Probe; which overlooking for the present, whilst the *Eschar* was digesting off, I endeavoured to mundify the *Ulcer*, by strewing on a good quantity of the *Præcipitate* upon the loose Flesh underneath, mixing the same also with my *Digestive*, as well as by Compression, and such Bandage as the Part was capable of, to forward what I could the union of the *Sinuosity*: But finding all Endeavours this way ineffectual, when the Tumour was now subsided, I made a stricter Search than before, and entering the Probe into the *Sinus* that

ran

ran directly downwards, found it so thick, that great Part of the *Gluteus externus*, especially the lower Part, must necessarily be divided, this being the Cavity in which the Matter seemed principally to be lodged, and whence, by pressing upwards on the *Extensor* Muscles of the Thigh, towards the *Ulcer*, great quantities thereof daily issued forth: Upon which account, there being nothing besides the Thickness of the Part to discourage the Work, I passed in a Director, preferring the same now to the Scissars, and bearing it with one Hand hard against the outside, with a Razor in the other cut into the *Sulcus*, dilating thus the whole length, and discharging a great quantity of Matter nested therein.

After which I filled up the large Wound with Dossils of fine Tow, laying over a Wad of the same, moistened in *Oxycrate*, and sprinkled thick with *Farina*, and a Bandage reaching round the Body as well as the Thigh, to retain it, and secure the *Hæmorrhage*, which however was considerable, requiring no other Styptic than the dry Dressings.

The next day, taking them out, I ordered equal parts of the yellow *Basilicon* and *Linimentum Arcei*, to be melted down in a *Panniken*, into which (having first armed some of the like Dossils thin with the *Linim. per se*, to prevent their imbibing more of the melted Mixture than occasion called for, as they will when dipped in dry) I lightly laid them, and dressed up with a large Pledget of the same digestive on the outside, and the Bandage as the day before: And so continued for three or four Days, 'till the Wound being digested, by the help of the *Præcipitate*, I *deterged*, soon after *incarning*, by lightly strewing the farcotic Powders of *Aloes* and *Sarcocol*, instead of

the said *Præcipitate*, 'till the large and gaping *Ulcer* was ready for dry Lint, which was my customary *Epulotic* I made use of, in those attended with a moist *Intemperies*, or where the Flesh is over lax and apt to be luxuriant.

Being near upon *cicatrized*, my next Enquiry was into the tranverse *Sinus* towards the *Anus*, whence most of the Matter now seemed to flow, and from whence, though I had made a bold stroke through part of the Buttock, and somewhat taken off my Patient's Courage, I still expected to encounter a farther Difficulty. I perceived the *Sinuosity* almost as thick, but not half the length, to reach the *Anus*; however, being got thus far, I had great cause to suspect its Penetration higher up in the *Intestine*, if not some meandrous Winding towards the *Sacrum*. I would now gladly have laid open the *Sinus* towards the *Anus*; but he desired farther time, being intimidated with the Uncertainty, but that there might be still more cutting when we were got up to the Fundament. Wherefore, having *cicatrized* the old *Ulcer* within a narrow compass, I told him he must either content himself with a *Fistula*, or give way to the farther Dilatation: As it was, I farther acquainted him, that it would be likely to incommode him in his Seat; and, admit a *Fistula* should after all ensue, it were better to dispense with such as was unavoidable, that was attended with the least Discharge, and the fewest Inconveniencies; whereas this at present seemed likely, in a short time, to drain him away. He now again asked me, If I could warrant his Cure by another Slash, if he should submit? I replied, It was not in my power to make an absolute *Prognostic*, at least 'till this Cavity was laid open. Upon which he left me; and in the interim some Pretender had

had got into his good Opinion, with a Promise of curing him by *Injection*, in a Week or ten Days time at farthest: Which having experienced for a Month without Success, but growing rather abundantly worse, being now in very great Pain; he again begged I would go to him. Where, examining the old *Sinus*, I perceived the same, thro' the drying Liquors that had been thrown in, growing hard and exceeding tender, inflamed round about, and threatening some new *Abscess* above.

In order to his Relief, by again hastening *Digestion*, I introduced a small Tent, such as the now contracted Orifice would admit, dipped in the warm *Liniment*, with a Pledget of *Basilicon* on the outside, and an *anodyne Cataplasme* on the inflamed Parts, *ex Mica Panis in Lacte cum Vitel. Ov. & pauculo Croci*: Upon which, after the second Application, the Matter, that seemed to threaten a fresh Apostemation, finding its usual Vent, came down in great quantity, and discharged as formerly, by which he grew easy (as when he left me): And, perceiving a necessity of somewhat farther to be done, I took him one Morning in a Disposition for the Work, and having thinned the *Sinus* what I could by the *Sponge-Tent*, at least made better way, I entered my Probe-Scissars, and instantly divided close to the *Anus*; then, searching with my Probe on the outside, and Finger *in Ano*, I discovered the Communication with the Gut the whole length of my said Finger: So that, not expecting his Compliance at another time, I was resolved not to loose this, and, immediately passing my Scoop in the place of my Finger, I entered the Button-end by the *Sinus*, and the other into the Furrow of my Director, when with a second Gripe I divided the *Sinus* also, with great

great Expectation that I had now laid a Ground-work for his Cure. The cross Incision bleeding moderately all this while, I filled up with dry Doffils, then rolling up more Lint, passed the same close up into the Wound made on the *Sphincter*, securing the Dressings with a Bolster of Tow, and the usual Bandage.

The day following, as well the tranverse Cut to the *Anus*, as the direct one up the *Intestine*, were dressed with the warm *Liniment*, after few Days mixing the same with *Præcipitate*, and thrusting up a Probe-Tent by the side of the *Intestine*, first armed, then rolled therein; proceeding after this manner 'till the Wound on the outside was near *incarned*, and that within almost healed up, both being now dressed up dry. Thus, when we thought all safe, it happened that taking off the Dressings, I observed a greater quantity of Matter than had flowed for several Days past, and examining first of all more narrowly into the *Anus*, whence I was jealous the said Matter came down, I could find nothing amiss there; but pressing down with my Probe, upon the newly incarned Wound on the cross Incision, to my very great Concern, I perceived another *Sinus* running very deep upwards, where, by the Inflammation, there seemed a new *Abscess* forming, when I was last called in, of which I took no notice 'till the rest was healed up; when I proposed a Consultation with his Physician and Mr. *Blundel*, in which it was concluded, that, considering his ill Habit of Body, (though in truth Necessity determined the Case) being highly *scorbutic*, and withal *asthmatic*, it might be of service to retain this Opening as an *Issue*, which was done accordingly; and yet now, many Years past, continues with very little Trouble: However, it gave a handle,

Sect. VI. Of *Fistulous* ULCERS.

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handle, I cannot say whether to an inconsiderate or ungrateful Temper, when he paid me twenty Guineas, as he said, with more Reluctancy than he would have given fifty, had I made a Cure. But such Gentlemen, you well know, is the hard Fate of Surgery, and in the Words of an old Rhimer,

*Too oft the Artist takes the greatest Pains,
Where he's rewarded with the lesser Gains.*

During the whole Course of my Attendance, he was kept strictly to a *Guajac. Diet*, or an *Aq. Cal.* medicated therewith, and the other *Woods*, declining *Purgation*, unless a little *Calom.* at sometimes, with *Lenients* afterwards, lest the Bent of the *Humours* should be that way invited, whence our Endeavours were to avert them.

Of the *Varicous* ULCER.

THE next we shall speak to is the *Varicous Ulcers*. Now an *Ulcer*, you must know, is so termed, ^{with *Varices*.} when lying close upon or adjoining to a *Varix*, or a knotted, turgid Vein.

These, by the continued Supply of a gross, faeculent Blood, or lying in the way of the same, hinder the kindly *Digestion* of the *Ulcer*, or being *digested*, the *cicatrizing* thereof; Or, finally, being dried up, which is most commonly with some Scab, or crusty Covering, expose them to break out again, by reason of some fresh Eruption from the Vein; or, rubbing off the Scab, to a new Fluxion of *Humours*, with great Pain attending.

The Seat of the *Varices* are most commonly the Thighs, but more especially the Legs; also the bottom of the Belly, particularly in pregnant Women,

men, through the Weight and Distension of the *Uterus*, at such times compressing the Trunk of the *Vena Cava*, whence the Return of the Blood being slackened, and its progressive Motion rendered still more difficult, by the Position of these Parts in the standing or sitting Postures, it thickens in certain parts of the Vessel, into a *Grumus*, distending the Sides thereof, to make way for other the thinner Parts to pass by, that an entire Stagnation may be prevented.

These *Varices* are sometimes enlarged to a great degree, as we took notice when speaking of the *Aneurisma*, and are often observed to lie naked in the *Ulcer*, whereby the corrosive Quality of the influent Humour, by the Heat and Acrimony of the Blood itself, or that of some *deterfive* Medicine made use of, together with the Rottenness of the Coats of the Vessels themselves, by lying long exposed, they often suddenly burst, and great quantity of the Mass, together with the Spirits, are exhausted in the Patient's Sleep, or sometimes waking, before the Surgeon is at hand to hinder it.

The *Anus*, or Fundament, as also before remarked, by reason of its Situation, is very much incident to these *Varices*, which, swelling and becoming painful, break forth and are named *Hæmorrhoides apertæ seu sanguinantes*, the *bleeding Piles*, as when they swell, but do not shed their Contents, they are termed *Cæcæ*, or *blind ones*; though this last Name is given them by some, when they lie concealed up high within, of which we have sufficiently treated in another Discourse.

The *Testes*, in like manner with the *spermatic Vessels*, are subject to the like Malady for the same Reason, their dependent Posture, as we acquainted you in our Discourse of the *Variocèle* and *Circocèle* among the *Herniæ*: But speaking now

to the Cure, of which this *varicous Ulcer* admits either one that is *real*, but seldom or never practised among us, or *palliative*, which is usual.

The first of these is performed by opening the Skin, and laying the Vessel bare; after which the same being taken up, and a Ligature made both above and below, the *Varix*, or knotted Vessel, as was performed in the *Aneurism*, is taken out, the Ligature being left to digest off, and the Wound afterwards healed as others of the Skin and Flesh underneath.

Hildanus tells us, in his *fourth Cent.* and *eighty fifth Observ.* of a very considerable Cure of this kind, where the *Ulcer* was most inveterate, and accompanied with a prodigious *Varix* of a Span long, thick as the Wrist, and divaricating from the Ham, downwards of the Leg; which, having separated from the Skin and Flesh, and tied up the Vessel, he cut out, and healed the *Ulcer*.

Severinus was also noted for these and the like desperate Operations, which procured him however the Name of *Severinus Severus*, or the *cruel Surgeon*; of which see more in our *Animadversions on Dr. Harris's Dissertations*, at the Close.

But even this Operation, tho' much less hazardous than the Deligation of the Artery, will not go down with our People, who are ready to run from us, at the naming the laying open or cutting out the *Varix*, and rest content therefore with a *palliative* Cure; that is, digesting the Sore with *Lenients*, and repressing the Growth of the *Varices*, by restraining Applications under a strict *Bandage*; endeavouring to dry up the same by some gentle *Epulotic*, such as our *Cerat. de Lap. Calam. Ung. Tutie Diapomph.* and the like.

It is this *Ulcer*, indeed, that has occasioned so much Work for the *streight Stocking-maker*, to whom

whom the Patient is often more obliged, than to the Surgeon, who without this Help can do very little in the Cure: In enterprizing whereof, as I said but now, having digested the *Ulcer* with *Basilicon*, either by itself, or mixed with the *Præcipitate*; as the Condition thereof shall require, you are, as we farther took notice, to apply all round, some repelling, drying and restringent Application, that may intercept the Flux of Humours, and repress the *Varix*, of which kind are the *Ol. Ros. vel Myrtel. cum Aceo conquassat.* Compresses likewise pressed out of the Juices of the following Plants, viz. *Fol. Plantag. Burs. Pastor. Millefol. &c.* or, for want of these, the common *Oxycrate* may supply the place.

Instead of these restringent and repercutient Remedies, the Author of the *Dissertation* before referred to, advises the *Tincture* of *Myrrh*, especially for those about the *Anus*; which, he says, he has known do mighty Feats therein; Encouraged by which, a Person in my Neighbourhood, with great numbers lying round the Verge thereof, exceeding painful, was trying the Experiment; but the Remedy intended made him almost mad, and he sent for me, who changed it for a *Cataplasm* of the *Decoct. Verbasci, cum Flor. Sambur.* thickened with the *Far. Fab.* mixing a little *Ung. Samb.* and the simple *Balsam* of *Sulphur*, which eased him presently, and in a few days removed the Complaint entirely.

Of a piece with this, I dare say, will be found his other Remedy for the *Varices*, prepared ex *Pice Judaica, Ol. Vetusto, Terebinth. ac Sulph. Virg.* But, to proceed;

The *Ulcer* being digested, and the Patient easy, I commonly direct a Pledget of *Diapompholigos*, which agrees usually very well with these *Ulcers* of the

the depending Parts, or my *Cerate* above-mentioned: When encompassing the Limb all round with a defenſative Emplaſter, *ex Diapalma, Bol. Ver. Sang. Drac. cum Ol. Roſ. & Acet. Vin. Alb. q. ſ.* I cut an Hole therein, for the eaſier dreſſing of the *Ulcer*: After which I give Direction that the Limb is well fitted with the *ſtreight Stocking*, which I moderately lace up from the Toes to the Gartering below knee, as the Condition of the Sore, more or leſs painful, will allow; by which the Cure of theſe *Ulcers* is much facilitated, I mean the *palliative*, holding commonly during the wearing of the *laced Stocking*, which many (and glad they can compound ſo) are forced to continue all their Life-time: Beſides a regular Diſcipline in the *Non-nat.* particularly their *Meat* and *Drink*, as well as *Exerciſe*: Bleeding alſo and lenient Purgation being required between whiles, to avert the Fluxion, and empty the *Cacoehymy*, not neglecting ſuch *Alteratives* as may temper the Fervour of the Blood, and ſoften the acrid or ſaline Serum thereof.

A Woman of a thin Habit, or a hot and dry Hist. 8. Constitution, having been for a long time afflicted with theſe *Varices* on both her Legs, a little above the inner Ankle, the uſual Place of their moſt painful Reſidence, at length, for want of her accuſtomed Evacuation by *Venæſection*, and proper Reſtrictives to ſuppreſs the ſame, an Inflammation falling down; the Skin firſt fretting, an *Ulcer* was formed preſently after, and the Humour, being very corroſive, ſpread round about, eating farther in; which being treated by ill Surgery, a ſpongy Fleſh overſpread the ſame the compaſs of an Half-crown, and the thickneſs of a Finger, making it look ſo frightful, that, by one ſhe had conſulted, it had been deemed *cancerous*.

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Under this Apprehension she sent for me, when examining the Nature of the *Fungus*, mild and pappy, a meer Effect of the Blood redundant and luxuriant in the Part, ouzing out of the *varicous* Vessel close adjoining; where, by sporting Nature, it was formed into this Excreſcence: Exquiring farthermore into other parts of the Leg, I perceived, from the Gartering downwards, the Veins all *varicous*: So that, as I had no other Reason, I gave her great Encouragement, at least of a *palliative* Cure, if she would submit to a regular Government, or proper Discipline. She then shewed me her other Leg, where, near the same Place, was also a very painful *Ulcer*, with a *Varix* lying exposed therein, and threatening a Rupture, also a great Inflammation round about.

This being incapable either of the *Precipitate* or the common *Digestive*, through its exquisite Tenderness, with a Feather dipped in the warm *Limiment*, I lightly went over it, laying down a soft Pledget armed with *Diapompholigos*, and my *Cerate* plaister-wise over that, then embrocating all round with *Ung. Sambuc.* rolled the Limb gently as she could suffer me, and confined her to her Couch. On the *Ulcer* with *Hypersarcosis*, I strewed the *Precipitate* pretty thick, laying a Pledget of the *Digestive* thin spread, to hasten off the *Slough*; also Compress and Bandage, as the Part would allow. After this I let her Blood, to take from the Plenitude of the Vessels, and refrigerate the rest of the Mass; prescribing a moistening and cooling Diet, with *Emulsions ex Amygd. d. Sem. iv. frigidis maj.* Barley and Oatmeal Grewels, now and then a little Meat that was fresh, and easy of digestion; but nothing *seasoned, pickled, powdered, fried, or baked*, not yet *strong Liquors* of any sort, that might heat or inflame the Humours.

After

After few days proceeding in this manner, I perceived the *Ulcer*, in which the Vein lay bare, still crude and indigested, with a *Sordes* on each side thereof, which I lightly sprinkled over with *Præcipitate*, dipping the armed Pledget in a little of the melted *Liniment*, and applying thereupon: But finding the *Præcipitate* not powerful enough, to gain upon the spongy *Ulcer* of the other Leg, by reason of its continual Bleeding, and washing off the same, I was put upon contriving some Remedy of more Efficacy, but such as should work with as little pain; lest I should not be admitted to renew it, as there was, or might happen to be, occasion, or as necessity called for it.

The *Pulv. Angel.* I knew would make a thicker *Slough*; but was too painful for a pusillanimous Patient, as I had now to deal with: Upon which Consideration I preferred the Powder of *Calx Viva*, strewing it over the *Fungus*, with a Pledget of dry Lint, by which I observed much less Blood shed between the-times of dressing. But neither hereby could I make the Progress I expected, so prone was the spongy Flesh again to pullulate underneath the *Eschar*. I then tried a touch of the *Butirum Antimonii*, which immediately induced a silver coloured *Slough*; but was too painful also to reiterate: So that, dipping a Slip of Cloth in a Solution of *Vitriol.* as we mentioned when discouraging of the *Ulcer* with *Hypersarcosis*, I scraped the same, when dry, into fine sky coloured Lint, and, laying a Pledget thereof on the *fungous Ulcer*, thereby rather suppressed the farther growth, than gained much ground. Wherefore examining round about the basis with my Probe, I perceived this Excrecence like that around some *Fontanels* with a moist *Intemperies*, was more than twice the Circumference of the *Ulcer* underneath, projecting

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over

over the sound Parts, and lying close thereon, yet capable of being raised up by the Instrument, thrust under. When I had made this remark, I dressed up again, as before, with the prepared Lint; the other *Ulcer* still remaining very painful, and not suffering the *Præcipitate*, how lightly soever, to be strewed: I contented my self with mixing a little thereof with the *Diapomph.* and, having besmeared the bottom and edges with a Feather dipped in the *Liniment*, laid it on, in hopes thereby of digesting out the *Sordes*, and incarning upon the Blood-vessel, which, lying thus exposed, I endeavoured to convince her, would perplex her Cure; and therefore I would gladly have made a Ligature thereon, and, being now perished, have digested it away: But she would by no persuasion be brought to hear of that Experiment, at least as yet: And, to render her Nights tolerable, had used to take $\frac{3}{4}$ ℥. and sometimes 3℥. of *Syrupus de Meconio*, going into her Bed, with $\frac{3}{4}$ ℥. of *Eleſt. Lenit.* every second or third Morning, which gave her a stool or two, and cooled her Body.

The day following, I brought with me my Instrument-maker, to take the compass of the excrescing Flesh at its basis, having before-hand acquainted him, that I would have a small Iron-Plate divided in the middle, each Piece, or half thereof, to be made with a semicircular Hollow; so that, placing the two Plates underneath the *Sarcoma* on each side, they should encompass it all round, and defend the sound Parts from the intended actual Cautery; the Plates being made a little concave on the underſide, to humour the make of the Limb.

At the same time I convinced my Patient, tho' not without some difficulty, that her Cure would be

be thus expedited; nor would the Pain, all things considered, be near so durable as that by the *Escharotics*, carrying more of Terror than real Doulour along with it. Approving our Contrivance, she seemingly consented, and, taking a Piece of thin Past-board for a sort of Model, I instantly with my Scissars hallowed the two insides, and, sliding them under the *Fungus*, exactly fitted them to let in the same; then gave them the Workman, who got them ready against the next day: At which time carrying with me a flat *Cautery*, a little bigger than the said *Fungus*, and, encouraging my Patient, I surrounded it with my Plates, whilst an Assistant held them close down with his Fingers, and the Iron being hot, as the Leg was held fast by another, I pressed the same close down, shifting it about as well on the circumference as in the midst, till I was got upon the Plate, and this without a second Iron, or heating my first a second time: The Patient acknowledging herself more terrified by the *Idea* she had formed thereof, than pained by the Operation, chusing rather, if necessity so required, another touch of the same, than the sharp Medicines which had before been ineffectually applied. But this Work dispatched, and the Plates withdrawn, I dressed up with a Pledget thin faced with the *Basilicon Flavum*; and also the other Ankle, where the *Ulcer* digested still slowly, and lay foul at the bottom, discharging little unless a sharp *Ichor*, altho' the Inflammation round about was much abated.

The day following the Burning, I perceived the Crust stick fast, and the *Fungus* at least levelled with the Skin round about; wherefore I continued the same Dressing, and, as the *Eschar* loosened or digested off, consumed the remainder with the *Præcipit.* thick strewed on, together with

a touch of the *Vitriol* Stone round about the Edge.

The *Hypersarcosis* thus removed, I observed several small *Varices* round about, which seemed to have given rise to the *Ulcer*, and which were after kept under, healing up by the help of a laced Stocking now put on, and a Pledget of dry Lint; whilst the less frightful, but more fretful one, upon the other Leg, continued still painful, and would not digest, till an Accident happened, I was not much concerned at; for the Coats of the Vessel, lying so long exposed, grew rotten, and in the Night the Blood gushed forth in large quantity; So that, perceiving what had happened, under the greatest Consternation, she called me up, where I found many bloody Cloths by the Bed-side, and, thrusting out her Leg, discovered the Blood running down apace; upon which, taking off the Dressings, and cleaning away the *Grumus*, I got a fair view of the ruptured *Varix*, and, whilst a Servant held a thick Pledget of dry Lint thereon, to restrain the Effusion, I prepared fresh Dressings, and a clean Roller, with what else I had occasion for; then, taking a small Button of Lint dipped first in *Oxycrate*, and after in the Powder of *Colcothar*, I clapped it down close in the place of the Lint aforesaid, with Compress expressed and sprinkled with *Farina*, rolling the Limb up again from the Foot to the Knee, intending hereby to destroy the Vessel; at least so much thereof as lay in the way, and was a hindrance to our Work of healing.

Two Days after I took off the Dressings, and found a Crust induced, as I expected, from the *Catheretic*, over which I applied my *Digestive*, and so continued dressing for three or four Days; when a second Alarm came of a fresh Flux, which I restrained

restrained as before, without any farther disturbance: The *Slough* digested out together with the *Varix*, by the help of a little warm *Liniment*; there remained only to *cicatrize* the *Ulcer*, which was soon accomplished by the *Ung. Diapomph.* After this I directed also for this Leg, as I had done before for the other, a *streight Stocking*, which she continued about six Months after, and then left them off, only Purging and Bleeding as I had given her Order, and remained after free from any Complaint of this Nature, for above twelve Months longer; when, by some Accident, of a Wrench upon her Ankle, her Leg began again to swell and grow painful, and I advised her to have recourse to her *streight Stocking*, which she has since continued with great benefit.

Of ULCERS with Caries.

THE *Ulcer* we shall next observe, both more Of Ulcers troublesome, and also tedious oftentimes than the with Ca- rest, is that complicated with a foul Bone, and ries. thence denominated a *carious Ulcer*: Which *Caries* is suspected by the *fetid Smell*, especially if the *Tent* or *Dossil*, which was thrust down to the bottom, comes forth, at the next Dressing, discoloured and stinking: As likewise by the Discharge, such as a thin *Ichor*, or oily *Sanies*, with a Quantity too large for the Proportion of the *Ulcer*, as well as from the loose or rotten *Flesh* in the same; the Difficulty of *Cicatrizing*, and often breaking out afresh.

These, I say, give ground to suspect the Bone is foul, more especially if seated among those of the *Tarsus* or *Metatarsus*, as in *strumous Ulcers*, or upon the Joints in those of long continuance.

But the Truth or Certainty hereof is gained by the Eye, where the *Cariosity* is exposed to the

same; or by Probation, when out of sight: For hereby, in pressing through the spongy Flesh, or entering the *Sinus* leading to the same, you will discover the *Periosteum* eaten off by the Humour, and a Rugosity or Porousness that lets in the end of your Instrument, the outward *Cortex* having been thereby corroded, which hinders its slipping along the same. 'Tis from the likeness of these Pores to those made in Wood, by a little Insect of that Name, that this sort of *Caries*, or Rottenness in these Parts of the Body, is named, by some antient Writers, *Teredo*: But, as in our Discourse of Wounds, we gave that Appellation, I mean of *Wound*, to the Solution of Unity made in these harder Parts, by any sharp or cutting Instrument; so here also those, made by a sharp and corrosive Humour, may, perhaps without a *Solecism*, be called *Ulcers* in the Bones, as well as those in the softer and fleshy Parts.

The Causes of these *Ulcers* are either external or internal: And thus in regard to the former, as we observed in Wounds of the Head, the *Cariosity* may be owing to the Negligence or Ignorance of the Surgeon, in not being so careful as he ought, in preserving the naked Bone from the Influence of the Air, at the time of Dressing; or dressing up with some greasy Application; as well as to the virulent and corrosive Nature of the Humour it self, attending and eating thereinto: For since we find that Metals and Stones contract a Rust, and moulder when gauled by the sharp and penetrating Particles of that Element, long time exposed to the same, no wonder the softer Texture of these Parts are oftentimes pervaded and thereby corrupted.

The internal Causes are some particular *Dyscrasy* in the Serum of the Blood, or other Juice secreted

secreted thence, which, having acquired an acrid and malign Ferment, or degenerating from their natural State, put on one that is venene, or highly corrosive; and which, like an *Aq. Fortis*, or some *Stygian Liquor*, is not only potent to dissolve the *Flesh*, but to destroy the *Compages* of the *Bones* themselves, and eat into their Substance, as is manifest in some *strumous* Affects, which we have here in our Second Section already, and in the *Venerereal*, elsewhere observed: But, hastening to the Cure.

In the Management of which you are not so directly to regard the outward *Ulcer*, or that in the *Flesh*, as the *Caries*, or *Ulcer* in the Bone underneath; without removing which, you can expect no firm or lasting Superstructure upon this rotten Foundation: However, where the *Flesh* is spongy, as usually at such times falls out, and lies in your way, you are first of all to remove the same by some of those *Medicaments* we formerly propos'd for the *Ulcers* with *Hypersarcosis*, till you have made room to come at the rotten Bone, where it can be safely done: Which Point being gained, you are to keep the *Ulcer* distended with *Dossils* of dry Lint, or dipped and expressed from the *Tinctura Myrrhæ*; lest otherwise, through a Neglect hereof, the said *Ulcer* being overgrown again with luxuriant *Flesh*, you find you had created much pain to the Patient without any advantage, having the same Task to repeat with your *calberetic* or *caustic* Medicines.

But, having laid the Bone thus bare, you are to consider the degree of Rottenness therein, and finding it only discoloured in its *Cortex*, or outward *Lamen*, the *Periosteum* being newly gone, you may probably get the same exfoliated by means of the dry Dressings, or the Tincture aforesaid: Or,

for the quicker Dispatch, with your *Scalprum*, (an Instrument for that purpose invented) you may rase off so much of the discoloured or tainted *Cortex*, till the Parts underneath appear fresh and ruddy, or of the more natural Complexion; when strewing thereupon some desiccative Powders, such as the *Pulv. Rad. irid. Aristol. Myrrh. & Aloes*, you forward a sound Incarnation thereupon.

Again, if the *Caries* be entered deeper, or is become porous, and withal white, (which is usually worse than the black and smooth) stronger Remedies are to be used; such, I mean, as the *actual Cautery*, or hot Iron, which, being daily repeated for sometime, more powerfully dries up the Humidity, and disposeth the rotten Part to scale, than all other Remedies whatever.

In the Use of the *Cautery*, these following Directions are however necessary to be observed: *First*, That you fit the Cavity of the *Ulcer* with an Iron or Steel *Cannula*, or Pipe, at the times of using, to defend the Lips and Sides all round from being scorched or burned; which may be taken out and cooled, by dipping in Water, upon occasion. *Secondly*, That, in applying the same, you take care to shun any nervous or tendinous Parts therein exposed, for fear of Convulsion thereby excited: Nor must you apply them at all, according to some, upon the *Cranium*, or *Spina Dorsti*, lest the Brain or spinal Marrow should be thereby inflamed: Yet, notwithstanding I have frequently used them upon the former, in several venereal Patients, to dry up a *Caries*, the Effects of *Nodes* seated thereupon, and promote their throwing off, without any ill Consequence attending.

After the use of the *Cautery*, you may strew on the Powders aforementioned, also the *Pulvis Euphorhii*,

phorbii, a celebrated Medicament of the Antients for these Purposes: Others propose the *Aq. Fortis*, or *Ol. Vitriol*. But these I never cared to meddle with, by reason of their exceeding sharp and corroding Property; or the particular Enmity, as we say, they are found to have (notwithstanding the one of them whitening thereof) to these Parts of our Bodies.

When the *Cariosity* is, by the Means above prescribed, removed, either by scaling or crumbling, and insensibly mouldering off, as happens at some times; the *Ulcer* in the Flesh may then, and not sooner, be suffered to *incarn* and *cicatriz*e, as in others with lost Substance we have before observed: But be sure you take notice, that in all these *Desquamations*, or *Exfoliation* from the said Parts, you must use no force in drawing away the same, till you find the corrupted Piece thoroughly loosened from the sound; and even then, if there be any Angle or Point thereof, shooting underneath, or lying intangled in the Flesh, it behoves you to be careful, that none the least Fragment or Particle be shut in, which would raise afterwards some fresh Disturbance, such as new *Abscess* or *Apostemation*; at the best protract the Cure, and obstruct the Cicatrizing of the *Ulcer*.

Farther, if the *Caries* has seized on the small Bones of the *Carpus* and *Metacarpus*, the *Tarsus* or *Metatarsus*, also those of the Toes and Fingers, as is very common in the *strumous* Distemper, called the *Evil*, 'tis rare to obtain any Exfoliation here: For having no considerable Cavity, when once they are corrupted, the sharp *Ichor* seizeth upon their whole Substance; so that, having waited long in expectation of their throwing off, you will be obliged, either to pinch them to pieces, and extract their broken Fragments, or otherwise content
your

your self in keeping the Bone in sight, by suppressing the *Fungus*, apt to rise at some times, with your *Catheretics*; and applying to the said Bone, either your dry Lint, the same expressed from the *Tinct. Myrrh.* or sprinkling on your desiccating Powders, till *Nature*, thus assisted, separating the tainted from the sound Parts, by loosening the Ligaments that held them down, they rise either in part, or in their whole Substance; and are taken forth, when a *Callus* may happen, tho' I think but seldom, to supply their Place, especially due Care being taken by suitable Applications, to deterge and dry up the *Ulcer*, with proper Splints, and convenient *Bandage* to support the now enfeebled Joint, and prevent the lodging of any Matter; together with such *alterative* and *specific* Remedies, as may have Power to subdue the Seeds of the original Disease, and prevent its Contagion spreading round about, or seizing upon other Parts, as we have before admonished.

But indeed, where any particular Joint, either of the Fingers or Toes, happens to be thus affected, especially in a *strumous* Patient, the quickest and the surest Method oftentimes, is the taking off such Toe or Finger, and endeavouring to rectify the Juices of the Blood, by an *antistrumatic* Course; otherwise, after long waiting for this *Exfoliation* to no purpose, 'tis odds if you are not forced upon the same.

In like manner, where it happens that the *Apopbises* or Extremities of the larger Bones are corrupted, and the *Caries* got into the Joints, the Case is still more deplorable and desperate, so great a quantity of the nutritious Juices being usually carried off, in the discharge from the *Ulcer* as to induce an *Atrophy*, and bring on a *Marasmus*, which

which destroys the Patient: The difficulty being the same in getting these parts of the Bones *desquammed*, as those smaller of the Toes and Fingers: So that, having no other prospect of relieving the miserable Patient, it is your Duty, before he is too much exhausted, to propose (where it may be practicable, as on the Ankle or Knee, the Wrist or Elbow) an *Amputation*: But if this cannot be enterprized, by reason of the Situation, as on the Joint of the Hip or Shoulder; or where the Patient will not consent thereto, there is little more that you can do than to keep your *Ulcer* clean, the spongy Flesh from rising, and the *Caries* dressed up dry, till time may dispose it for Separation: Whilst the Physician contributes farther Assistance, by keeping off the *beddic Fever*, softening and contempering the Juices, strengthening the Tone of the Blood, and preventing its Colliquation; through which, either by Sweats or Loosnesses, together with the great discharge by the *Ulcers*, these unhappy Patients are commonly, as before observed, exhausted or drained away: But of this we have spoken already in the *sinuous* and *fistulous* Ulcer.

In regard to the Method of attempting the Cure by *vulnerable Injections*, I think it unlikely to succeed better here, than in those we formerly took notice of.

As troublesome sometimes, and of bad Consequence also are the *Ulcers* where a *Caries* lies under an *Artery* or *Tendon*, and which therefore cannot bear, nor will admit, those sharp Medicaments, hot Irons, or *desquamatory* Applications, the Bone requires; and which must therefore be treated in a milder way, till *Nature* disposeth the rotten Part for separation: But if the *Tendons* only, and those of lesser Import, as the *Flexor*
or

or *Extensor* of a Finger or Toe, as in some *Ulcers* of the *Metacarp* or *Metatars*, obstructs the Work, or hinders your Application of suitable Remedies, the same must either be digested off in *Slough* or divided, if you cannot otherwise accomplish your End, and the *Ulcer* after treated as above directed.

HIST. 9. A *Linnen Draper* in *Cornbill*, riding in a Chaise with a vicious Horse, and trying to break him, the Horse, upon whipping, threw his Hind-Foot into the same, and, with one of them, struck him smartly upon the fore-part of his Leg. Presently after the Hurt I was sent for, and examining the Limb found there was no Fracture, only a Rase on the Shin-Bone: However his Pain was very exquisite, being incapable of setting it to the Ground, or even letting his Leg hang down.

His Habit of Body, by a free way of Living, being none of the best, I did all I could to keep off the Fluxion, Bleeding him freely upon the Accident; and after, covering the Excoriation with a Digestive, surrounded the Part with a defensive Emplaster, ordering him to keep up, and to live as sparingly as he could, in respect to his Diet and Liquors.

The next Day, notwithstanding, I found a Tumour stretching down the Shin-Bone, so exceeding tender that he could scarce suffer me to remove the Plaister, or with my Finger, though very gently, to embrocate the Part, *cum Ol. Rosar. ac Tantillo Aceti*; when laying down the same, and gently rolling from below upwards, I dressed him up again with a small Pledget of my *Cerate* upon the rased Part.

The Day following, the Swelling still encreasing, and beginning to inflame, I took off the defensive, and directed an *anodyne Cataplasim*, *ex decocto*

cocto

cocto Flor. Sambuc. ac. Fol. Rosar. cum Mica Panis, Vitell. Ov. ac pauculo Croci, as directed in the incipient *Pblegmon*; of which Kind I now suspected this would prove, mixing a small Quantity of *Unguent. Sambuc.* therewith, and embrocating the Parts all round before its Application, the better to keep it soft and easy: But finding our Endeavours fruitless, to discuss the impacted Humour, a Fluctuation being perceptible underneath, after two or three Days more, I changed this also for another, *ex Lill. Alb. cum Ficubus in Lacte coctis*, to forward the Maturation and hasten the Discharge, considering the Part ~~to~~ lay upon, the Shin-Bone, or Ridge of the *Tibia*, so nigh at hand: When, in short time afterward, the Tumour being suppurated, I applied a *Caustic* on the most rising Part, rather inclining to the inside, and the same Night let out the Matter: Upon which he grew easy; and, continuing my Digestive, the *Eschar* at about the Week's end cast off, and left a very fair and florid *Ulcer*; which being dressed with the warm *Liniment*, and, as the Flesh therein required, strewed over with *Præcipitate*, appeared well disposed for healing; the Sinuosity all round, which was at first very considerable, and from whence large quantity of Matter had discharged, uniting by compress suitably adapted; and the *agglutinative Bandage*, so termed by the Antients, or the Roller with two Heads, as we have formerly taken notice, so managed over the said Compress, as to assist the pressing forth of the same from the Cavities, and promote the Union of the Parts severed thereby: The Bone to all appearance safe, and not denuded of its Membrane, the *Periosteum*, which however seemed thickened, rendering the *Ulcer* exceeding painful; and, notwithstanding our Endeavours to get incarned,
it

it quickly after sloughed off, leaving the *Tibia* bare on the inside for about half an Inch in length, where the source of the Mischief first of all began, from contusing of this Part by the Horse-shoe.

In order to keep under the spongy Flesh, it was sprinkled with *Præcipitate*; and the better to come at the bottom, and dispose the *Tibia* for *Desquamation*, I laid in a Piece of Gentian-Root, which by the next Day had so enlarged the *Ulcer*, that we had more room for our Dressings: But the Sore growing very painful, he would not suffer its Repetition; so that I was obliged to keep the Cavity distended with hard Dossils of dry Lint, and a moderately streight Bandage for security thereof, dressing up the Bone with a Pledgit express from the Tincture of Myrrh: And whilst we were thus waiting the *Exfoliation*, a new Tumour with Inflammation arose below, threatening an Abscess. We were now forced to slacken the Bandage, and try to discuss this fresh Disturbance, embrocating as at first with *Unguent. Sambucin*. When after a few Days, the same encreasing with throbbing Pain, I found there was no preventing an *Apostematation*, and therefore changed the first Application for a *suppurative Cataplasm*. Upon which my Patient, somewhat discontented, called in Mr. S—r, a Person, I think, of more note than Honour, (at least I found him so) and, I am sure, of no sounder Judgment, or more Learning, than many others of our Profession. At our Meeting it was proposed to lay on another *Caustic* upon this new *Abscess*, of such Dimensions as to procure an *Eschar* as large as a Crown-Piece; and letting out the Matter, digesting also the same off, we found (as I expected) a very troublesome *Ulcer*, so apt to be

be over-run with luxuriant Flesh, that we had near three Months Work to reduce it to a condition of *Cicatrizing*; sometimes strewing round the Edges, the impalpable Powders of *Lap. Calam.* *Lapis Tutie*, prepared Lint; having not, without much Pain and Difficulty, levelled the Flesh with that of the *Calx Viva*, or a touch of the Alum and Vitriol-Stones. His Reason for so large an *Eschar*, was to prevent the Trouble of Dilating afterwards, which the same Compress and Bandage, as used in the beginning, might have obviated in all likelihood; altho' there was the less notice taken of this, because of our attendance upon the *Caries* in the *Ulcer* above, which at length began to rise, but lay intangled at each Extream, and bound down by the Flesh; upon which I declared my Dissent against any Force, to extract the same, advising rather our waiting a few Days for its being more perfectly loosened; in the mean time strewing on the *Præcipitate* upon the Flesh: But my Assistant, impatient of longer Delay, and to shew his Dexterity, I suppose, whilst my back was another way, thrusting his Probe underneath the *desquammed* Fragment, and bearing outwards therewith, up sprung the same near a Yard high, with Blood following. However, we continued our dry Dressings, and, as it happened, meeting with no farther Interruption from any Point or Angle left behind under the Flesh, (of which there was too great Hazard, I think, run by this hasty forcing it up) in some time after healed the *Ulcer*, whilst the lower created us longer trouble; and before we could get a *Cicatrix*, at least such as would hold, we were obliged to continue the Patient under a strict *Regimen*, as to Rest and Diet, giving *Calomel.* between whiles, ordering also a laced Stocking, which

which he wore some time after: And, notwithstanding the vast *Eschar* upon a Part so sensible as the *Tibia*, that had occasioned a Work of so long time, by the Fluxion and *Fungus* accompanying, which there was no occasion for; yet by the mean and little Artifice (altho' neither Art nor Judgment did preside therein) of throwing out the Bone, my Assistant was supposed to have wrought a Wonder; and it was surmized by the Family, that, had he acted by himself, the Bone might have been got out sooner, and the least Apoptemation, whose tedious Cure he had manifestly occasioned, been prevented: But he is gone, and I have trod, I think, as softly upon his Ashes as I could.

Of the Old or Annual ULCERS.

Of old or Annual Ulcers.

THE last of the *Ulcers* we shall observe, is the *old or annual*, so named from its Duration or Continuance of so many Years. whereby having contracted an obdurate or stubborn Quality, it will not, but with great Difficulty, give way to *Chirurgery*, whether in *Digestion*, *Mundification*, *Incar-nation*, or *Cicatrization*. Of kin to this are the *Telephian* and *Chyronian*, so called by the Antients, of which before; and in whose Cure you must expect to encounter with much Trouble; because not only the *Fibres* are distorted, the *Tubes* indurated, or grown as it were *callous*, with the Vessels of all kinds, having recourse thereto, dammed up and obstructed; but the *Fluids* also, or *Juices* round about, so vitiated, or perverted from their genuine *Crafts*, that it must be a Work of Time to render the first so pliable as they ought to be, or to restore the last to their pristine Temper and gentle Disposition.

Farthermore,

Farthermore, in all these *Ulcers* of long standing, the same Regard and Circumspection is required, and ought to be used, as we formerly laid down for the healing or drying up the *Fistula* of any continuance, viz. That the Physician be consulted to mend the diseased Habit, or morbid Condition of the Blood; and the Humours thence by the *Glandules* secreted, as (after general Evacuations premised) by a *Diet* of the *Woods*, or an *Aq. Calcis* medicated therewith: Also *Alteratives* specific to the diseased Habit, whether *scorbutic*, *strumous*, *venereal*, &c. such as the *Antimon. Diaphor. Bezoard. Min.* with the *Mineral Aethiops*; whilst the Surgeon does his utmost, with his local Remedies, to render the *Ulcer* more tractable and benign; softening the Induration, as was directed for that with *callous* Lips; consuming the *Fungus*, if any happens to lie in the way, with such Remedies as were laid down for that with the *Hyper-sarcofis*, subduing its *phagedenic* Quality or Erosion, as in the corrosive or eating *Ulcer*, as before. Lastly, the Rottenness of the Flesh or Bone, as mentioned but now for the *putrid* and *carious*; and, which you will see very material, endeavouring to alter the Figure of the same, especially if circular, whence you will find an advance towards the Curation; when, by the common Method of treating *Ulcers in general*, together with the Assistance of your internal *Regimen*, as above, you perceive you gain but little upon the rebellious Malady, you are, in the Physician's Absence, to give the *Turpeth. Min.* once in three or four Days, in a Dose proportionate to the Age, Sex, and Strength of Body; as also Custom to the Use of such like Medicines, 'till there ensues a *Ptyalism*, or Salivation, which must be kept up for twenty five or thirty Days, if the

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Constitution will allow: The several other Methods of raising which, and how to obviate all attending Accidents and Symptoms, you will find plainly laid down in my *Syphilis*, or *Practical Dissertation* on the venereal Disease, printed some Years since, and reprinted lately with Additions.

After this, the drying *Diet*, Sweating and Purging between whiles, will conduce to the farther security of your Patient, and preventing a Relapse; not forgetting the Assistance to be had generally in these Cases, from the *laced Stocking* or *Arm-piece*, according to the Situation of the *Ulcer* upon the Arm or Leg: And truly much of this Time and Trouble might be saved, would our Patients admit of the rougher Management by the Knife or Fire, without which 'tis rare to find much Dispatch, or to work any remarkable Cure of this kind.

The former, I mean the *Knife*, is employed in cutting away the *callous*, or otherwise tainted Flesh all round the sides, as well as bottom; then dressing as a recent Wound with loss of Substance: The latter to consume the same, and treating the *Ulcer* as a profound *Combustion*.

Severinus, for this purpose, and at these times, was wont to lay fine Pledgets of Lint or Tow, dipped first in Spirit of Wine, all round the brims or edges of the *Ulcer*, and then set fire to the same: For Women and Children, a Rag spread over with some mercurial Ointment, was laid between; and for rustic or stronger Bodies, he filled hollow Pipes of Brass with glowing Embers taken out of the Fire, and rolled them back and forwards lightly over the edges and surface of the *Ulcer*, by which he assures us he had cured some of ten Years standing in less than four times so many

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many Days; which verifies that *chirurgic Apothegm*,

Qui non medicamentis, ferro: Et qui non ferro, sanantur igne.

The last named Author calls it, *Omnipotens Ignis*.

Neither of which, however, would avail in the Hist. 167
Case of an elderly Gentleman I was concerned for many Years past, Mr. *Darnelli*, at that time of the *Penny-Post Office*, and Brother to a Fellow of our College, now living at *Stanmore* in *Middlesex*: This Gentleman had for many Years past laboured with a large *Ulcer* on the Leg, wherein the *Tibia* lay bare and *carious* a great compass; beginning, as I was then inclinable to believe, in the nature of a *Spina*: The edges round about were by length of time grown hard, and as it were *cartilaginous*, by no means submitting to the *Præcipitate*, nor indeed to any other *digestive* or *deterfive* Medicine; only furnishing a stinking *Gleet* between the times of Dressing, which rendered the same very offensive,

He sent for me to take my Opinion, who, coming into his Chamber, found an *Apparatus* by him, as if prepared by an Artist, *Dossils* and *Pledgets* of *Lint*, others larger of *Tow*, some armed with a *Digestive* of *Linim.* and *Præcipit.* others with my *Cerate de Lapide Calam.* which, unknown to me, he had procured by some other Hand, his *Spoon* and *lighted Candle*, with a *Bottle* of the *Tinct. Myrrb.* and lastly, a *Wad* of *Tow* to lie over all, that might imbibe the *Gleet*, and save the fouling of *Linnen-Rags*, which, through the great Expence thereof, were the more valuable: Finding, I say, every thing in so great order, I expected a Surgeon was to have met me, or who had been there to get

the Dressings ready: But he quickly undeceived me, telling me he had many Masters, unto whom he had served more than two Apprenticeships, meaning Surgeons, who had formerly undertaken his Cure, but all of them disappointing him; and, having been at a very great Expence, a kind of Necessity, as foreseeing no end of the Work, had put him upon thus practising the Art upon himself; by which he had kept his Malady so far under, as to be capable of attending the Office, of which I think he was a kind of *Sub-Governour*, or *Deputy*.

When I came to examine the *Ulcer* strictly, I found the *Cariosity*, or rotten *Tibia*, which lay bare about three Inches in length, and its whole Breadth on the inside black as Soot, but fast and immoveable; whence, and by the many Years it had lain thus exposed, I inferred the Taint had penetrated its whole Substance, and that there was little good to be done in so inveterate a Disease: For I perceived he had been no Stranger to the strongest of the *desquamatory* Powders, as the *Euphorbium* and some others; neither yet to the *actual Cautery*: So that, considering his advanced Age, together with his thin, scorbutic Habit, I could not see any great likelihood of Success by any Means we could take: And therefore, being shy in the Engagement, I rather persuaded him to continue his own Method, 'till he discovered any Loosening of the corrupt from the sound Part. But some new Disturbance arising, and disabling him from getting out to the Office, where his Attendance was expected, he sent for that eminent and judicious Surgeon Mr. *Edward Green*, who did all that Art could administer for him, attempting farther to subdue the Malignity with the hot Irons, and hasten, if possible, a Separation of the

the *Caries*; but Nature was too far spent, and a Constitution, before upon the breaking up, less able to grapple with so rough a Treatment; for being seized with a *symptomatic Fever*, as his Relations conjectured, from the Pain, a *colliquative Diarrhea*, or Flux, they told me, came on, and quickly sunk him under the Administration.

Of the Verminous ULCER.

THERE is yet another *Ulcer* of a peculiar kind, Of the
verminous
Ulcer. and which, from a particular sort of Putrifaction, affording both *Matrices* and *Pabulum* also to such Insects, is called *verminous*; and in the Cure of which you are especially to aim at the destruction of the *Animalcules* fostered therein, before you address yourself to the *Ulcer*; though in doing this, you may very probably, with some of your mundificative Applications, correcting the putrid Ferment, overcome also the Offspring thereof: For which end are chiefly directed some strong Decoctions of the Bitters, wherewith the *Ulcer* is to be well washed and fomented; such are the *Fol. Centaur. Absinth. Abrotani, Tanaceti, Marrubij, Hyper. Mentb. Scordij*; also the *Fella Animalium, Farina Lupin. Pulv. Aloes, ac ejusdem Tinctura in Vino extracta*; and, after digesting with *Præcipit. and Basilic. or Linim. Aræi*, some proper Deterfive must be applied to cleanse away the Filth; for which Use are the *Mundif. ex Apio Unguent. Apostol.* and, in case of greater Putrifaction or Insensibility in the Part, the *Ung. Ægyptiacum*. But more of this in our Account of the *putrid and sordid Ulcer*.

‘ Dr. Lister has given an account, in the *Trans-* Hist. I
‘ *actions*, of great Numbers of the *Lumbrici tere-*
‘ *tes*, taken from an Ulcer upon the Ankle of a
‘ Girl at York: And a much stranger Account we

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‘ have of a long Worm, thrusting forth its Head
 ‘ a little above the Instep of a Person, at *Fort St.*
 ‘ *George*, in the *East-Indies*; which, the Author
 ‘ tells us, are bred by the Waters drank near that
 ‘ Place. They break forth from all parts of the
 ‘ Body, and are very troublesome and dangerous:
 ‘ For I have known (saith he) those who have kept
 ‘ their bed for them, some six, some ten Months;
 ‘ some have lost their Legs, and sometimes their
 ‘ Lives also thereby. They come out sometimes to
 ‘ the length of six or seven Yards, being at their
 ‘ first appearance small, like a Thread; after
 ‘ growing larger and stronger by degrees. They
 ‘ wrap them up upon a little bit of Stick, or Cot-
 ‘ ten, putting on them Onions, and Flower of
 ‘ Rice boiled in Milk. The chief Care is to be ta-
 ‘ ken not to break them; for then it is that they
 ‘ do mischief. When mine (continues our Author)
 ‘ first came out, for about forty or fifty Days, it
 ‘ was by little and little, without putting me to
 ‘ much Pain, but that I could go up and down, ’till
 ‘ it was come out a Yard and a quarter: But after-
 ‘ wards, one day sitting too much, I hurt the Worm,
 ‘ and enraged him so, that he broke off himself, and,
 ‘ going in, caused my Foot and Leg, up to the
 ‘ Calf, to swell ’till the Skin was ready to burst,
 ‘ which kept me restless, and threw me into a Fe-
 ‘ ver. I had a Surgeon, and kept my Bed twenty
 ‘ Days; in which time I had several Fever Fits, the
 ‘ Worm, being broke in pieces, came out in seve-
 ‘ ral parts of my Foot: But the Chirurgeon ap-
 ‘ plying such things as destroyed it, and turned the
 ‘ same to Matter; he then lanced my Leg a little
 ‘ above the Ankle, and another place on my Foot,
 ‘ and so by attractive Plaisters drew all out.’

And thus, Gentlemen, I shall shut up my Dis-
 course of the *Ulcer in general*; which, though
 short

short of one so elaborate or exactly methodized as it ought, or perhaps had been, had my Affairs permitted greater leisure: Yet, I hope, will be found to answer the Design, and so instructive also, as to render any Account of this Disease, as affecting some certain Parts, less necessary: However, not having yet, I think, exceeded the Bounds of some of the foregoing Sections, I will touch upon a few Particulars unheeded in what went before, that the same may be farther useful.

And First, as to the Ulcers of the hairy Scalp, Ulcers of the Cornea! we have already given Directions for those which are usually the most rebellious and stubborn, when speaking of the *Achor* and *Favus*, in another Treatise, of the *Skin-Diseases*, Part II. Chap. 2.

Ulcers above the Orbit of the Eye, especially with a bare Bone, require, as well before as after *Exfoliation*, the most powerful, exiccatating Medicaments, both *Sarcotics* and *Epulotics*, being usually supplied with great Afflux of Humour, and abounding with Humidities from the *Sinus* in the *Cranium* underneath; upon which account the Tincture of Myrrh and Aloes may be applied with Lint; also the *Pulv. Thuris Sarcocol.* and the like are at such times mixed up with the *Linim. Arcai*, or with a little *Mel. Rosar.*

The Ulcer of the Eye is in some measure provided for, in what we have formerly laid down, Of particular Ulcers. when discoursing of the *Strumous Ophthalmia*; besides which, other Remedies may be prepared of the subtil or impalpable Powders of *Myrrh. Aloes, Sacch. cant. alb. Sarcocol. Thus, Cerussa, Lap. Calaminar. Tutia*; which are either to be infused in some of the *ophthalmic Waters*, as the *Aq. Euphrag. Chelidon. Fenic. Verbena Rasar.* or thickened

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with the Juices of those Plants, together with the *Mel. Rosar.* into an Ointment, of which kind is this following from *Riverius* :

℞ *Suc. Fœnicul. Suc. Chelidon. a ʒi. Suc. Rutæ ʒ ss. Pulv. Aloes ʒj. Vitriol. ʒ ss. Æris Virid. gr. v. Fellis Anguillæ Bovin. vel Porcini ʒ ss. Sacch. Cant. Pulv. ʒ ss.*

Bullientur Succī & clarificentur, dien. adde pulveres, fiatque Collyrium.

The Cinnamon and Ginger, directed by the Author, are here omitted.

Heurnius, for the Ulcers of this Part, directs thus; which he calls *Infallible Ophthalmicum*, and which I have tried on some foul Ulcers on the Cornea with success, viz.

℞ *Lapid. Calamin. ter usti & Aceto Vini extincti ʒj. Myrrhæ, Plumbi usti ac loti a ʒ ss. Croci gr. v. Opj gr. ij. Æris usti ʒiv. Decocti Fœnugr. ʒj. misceantur exactissime supra lapidem porphiritem: vel loco decoct. superscript. cum Axung. Porcin. rec. in Aq. Ros. lot. ut. f. Ung. melioris consistentiæ nec non durabilior.*

The *Ol. Myrrh. cum Sacch. cant. alb. Ov. inclus. & humido cellario per modum deliquij extractum*, is a good *Ophthalmic* for these purposes; as also the *Aq. Mellis* heretofore observed: So likewise this,

℞ *Sarcocol. Aq. Ros. nutrit. Cerus, Aloes lot. Myrr. Lap. Tut. a ʒ ss. Sacch. cant. Alb. ʒj. mucilag. tenuior. Sem. Cydon. in Aq. Plant. extr. q. s. m. f. Collyrium.*

But observe carefully in these as well as others, that you digest first of all, before you go about to deterge, and deterge before you attempt to cicatrize; as we have acquainted you, and by what Means, when we discoursed of *Ophthalmia*; where we also

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also described the Ulcer called *Ægylops*, and the *Fistula Lacrymalis*.

Ariantius takes notice, that in the *Pblyctane*, or little bladdery Pustules of this Part, having, with the Point of a golden Needle, let out the Water; when the Case was obdurate, he dried up the Remains with the following Remedy;

℞ *Pompholig. præb.* ʒij. *Aloes lotæ* ʒj. *Sacch. cand. pulv.* ʒj. *Croci* ʒss. m. f. pulvij.

Which, having tied up in a fine Rag, he dipped in equal Parts of the Waters of *Vervain*, *Rose* and *Fennel*, and pressed the same out two or three times a-day into the diseased Eye.

There is a very singular Disease of this Part HIST. 12. unobserved even by Mr. *Banister* himself, who has explained above an hundred, and wrote the best upon that Subject of any Man in *England*, or, for ought I know, upon Earth; which, for its Curiosity, I shall just take notice of. ‘ In an Epistle to *Jacob Guillemeau*, sent by a Surgeon, belonging to the *Royal Family*, in *France*, and particularly to the Duke of *Guise*, there is mention made (saith our Author *Quentzius*) of an uncommon Disease of the *Tunica Conjunctiva*, occasioned by a small Worm with many Feet, somewhat bigger than the *Cyrones*, (described in my *Treatise of the Skin Diseases*) bred under the White of the Eye, and occasioning the most intolerable Itching thereon; for which I took all imaginable Pains to free my Patient, by an antient Method used in the *Pthiriasis*: But, not succeeding, he was carried to a Woman at *Joinville*, who in my presence, with the Point of her Needle, plucked from the *Conjunctiva* these *Animalcules* very expeditiously, and with little Pain. Had I not seen (says he) these little Worms moving with my own Eyes, after they were pulled out, I should have believed

‘believed it impossible, they could have been ingendered in such a Part. The same Person affirming she had very commonly performed the like Operation, without any farther Trouble ensuing; and that the Men of that Place were peculiarly obnoxious thereunto: Which, upon Enquiry made for that purpose, I found most certain.’ Had this Disease ever appeared among us, I scarce think it could have escaped Banister’s Observations.

Of the
Eye-Lid.

The *Eyelid* is also subject to an ulcerous Affection, called *Lippitudo*, with our People a *Blearedness*; by which the inner part of the lower Lid most commonly is turned outwards, rendering the Visage frightful and unseemly.

These Accidents are frequently owing to Burns, upon healing up which, do all you can to prevent it, a Stricture will sometimes ensue, and the Lid is pulled down by the *Cicatrix*, which is not to be remedied. The like Misfortune hath followed after the *Small Pox* and *Measles*, where a Flux of acrid or sharp Humours has long attended; together with an *Epiphora*, or involuntary Flux of *Serum* in the form of *Tears*: The Remedies for which, so far as Art can help, may be collected from what we formerly laid down concerning the said *Epiphora*, amongst the *strumous Symptoms*: And where it so falls out, by the great and continual Moisture of the Parts, accompanied with Ulceration, a fungous or spongy Flesh ariseth, the strongest of your desiccative Applications there inserted may happen to be wanted, which failing, you may venture to strew on, but with the greatest Caution, some of the milder *Catheretics*, such as the *Pulv. Vitriol. vel Aluminis*, mixed together with a Proportion of the *Bolus Verus*, *Pulv. Cort. Granat. Fol. Rosar. ac Balsam.* also a light touch of the *Lap. Caelestis*, or
Vitriol

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Vitriol Stone itself, taking special care you excite as little Fluxion thereby as possible.

The contrary Affection to this last, is the *Lip-pitudo Sicca*, that is, where the *Cilia*, or Eye-lashes, together with their Cartilages, are, by means of a saline and hot Humour, overspread as it were with branny Scales or Scurf, producing frequently a troublesome Itching on these Parts; In order to the relieving of which Grievance, as, in the *Humid*, we directed the most exiccating or drying Topics, Evacuation going before; so here contrarily such as *humect* or moisten and refrigerate are altogether most eligible; and such are the *Fotus ex Decoct. Fol. Malv. Alth. Mercurialis, Verbasci, Viol. Collyria* also or *Lotions*, prepared *ex Mucilag. Sem. Lini. Pfyll. Hord. Gallic. Sem. Papav. in Aq. Plantag. Rosar. vel Sperm. Ranar. Cataplasms ex Medul. Panis in Lacte*; after which, or between whiles, for healing up the Excoriation, the edges of the *Cilia* are to be smeared over with the *Ung. Diapompholigos, Tutia*, or our *Cerate de Lapide Caliminari*. Proceed we now to those of the *Nose*.

And here also we must refer you back to the *Of the Strumous Symptoms*, where we have taken notice of *Nose*. this *Ulcer* under the Name *Ozena*, if the same is of that Parentage; and to our *Syphilis* when *Veneréal*.

Ulcers of the *Tongue*, and other Parts of the *Of the Fauces*, have either a relation to the *Apthæ*, when *Tongue*. of the milder sort, called *benign*; or *Veneréal*, also *cancerous*, when *malign*.

The former being digested with the common *pectoral Decoction*, and a little *Mel. Rosar.* or the *Decoct. Ulmi* of *Bates*, may, if not submitting thereunto, but spreading, be farther touched with the said *Mel* and a little of the *Tinct. Myrr.* or the *Ægyptiac.* it self upon occasion; and, after their Deterision, they may be dried up with that
of

of some of the *vulnery* Plants, such as the *Plantag.* *Equiset.* *Frugaria*, *Matrisylva*, *Aquilegia*, *Rubus*, which are made still more exiccating by the *Fol. Rosar.* *Balaust.* *Cort. Granat.* edulcorating *cum Syr. de Ros. Sic.* instead of the *Mel Rosar.* of which more in our second Section, when discoursing of the *Ranula*; as also in the foregoing of Wounds of the Tongue.

Of the
Throat.

When these Affects seizing, especially on the *Uvula* and *Tonsilla*, prove *venereal*, you may consult my *practical Dissertation* upon that Distemper, in order to their Cure: But if the result of Apoptemation, the Remedies aforesaid, for those of the *Fauces*, will be sufficient: When if after the Inflammation, a Relaxation should happen to the *Uvula*, the same must be attempted by *astringent Gargarisms*, such as a strong Tincture or Infusion of the *Fol. Rosar.* *Flor. Balaust.* &c. made in Claret, or the Smith's Water, being moderately acidulated, *cum Ol. Sulph. vel Vitriol.* adding the *Mel. Rosar.* thereto. When being disappointed hereby, and the Disease of long standing, some part thereof is to be excised: Yet, before the same is enterprized, you ought to be thoroughly ascertained, that the remaining part will not corrugate or shrink up after: For this, by spoiling the Voice, will leave a Disease full out as troublesome, as that for which it was intended a Remedy. Many Mischiefs of this kind ensuing, the imprudent Excision of this Part, are recorded by *Skenkius*, p. 195. *Botallus* gives an Account of the same so relaxed, as to hang forwards to the *Dentes incisores*; which he relieved entirely without cutting, by Gargarisms made, *ex Summit. Vitium*, being then in a Country Village, and destitute of other Help. *In libello suo de Catarrho.*

The *cancerous Ulcer* of these Parts, will bear
neither

neither *Digestive* nor *Deterfive*, nor must you expect to fare better with *desiccating Topics*; instead of which you are only to endeavour *palliating*, by some *anodyne*, *lenient*, *refrigerating*, and *demulcing Gargles* or *Lotions*; such as the thin *Mucilages*, *ex Sem. Cydon. Malv. Hyosciam. & Papav. in Aq. Hord. vel. Sperm. Ran.* with which may be mixed a few Grains of *Nitre*; also the *Sacch. Saturn.* sweetened moderately with the *Mel Ros. Syr. Diacod. de Nymphaea*, and the like; and, in great Extremity of Pain, the *Suc. Solani, Hyosciam. Lactuca, Portulacæ*, or with these a few Grains of *Opium*, adding the *Syr. Papav. Alb.* or the *Mel Ros.* After the use whereof, the Ulcer may be sprinkled *cum Pulv. Ranar. comb.* or the *Aq. ex Ranis in medio Alembico suspensis distillata, ut Empyreuma impediatur*, may be frequently held in the Mouth; which is accounted a sort of *Specific* in these *Ulcers*.

The Ulceration or Erosion of the *Gums* may be washed with a Decoction of the above-mentioned; to which, in scorbutic Affects thereof, may be added the *Fol. Cochleariæ, Salviæ*, in red Wine and the Forge-Water; or they may be touched with a mixture of the *Mel. Ros.* and *Tinct. Myrrb.* also the *Spir. Vitriol.* half a score Drops to an Ounce of the said *Mel*: The *Mel Elatines* and *Spir. Cochleariæ* is a great Secret with some for these Uses; likewise this following is commended for the spongy and putrid *Ulcers* of the same Parts.

℞ *Myrr. Ter. Japon. Pulv. a ʒij. Coq. in Vini Rubri ℥vj. ad tertias in vacillantibus dentibus ac gingivarum laxitate.*

℞ *Coral. Rub. Sang. Drac. Boli veri a ʒi. Myrr. Elect. ʒij. m. fiat Pulvis Dentifricius vel cum Melle Rosar. formetur pro gingivis scorbuto erosis.*

℞ *Tincturæ*

℞ *Tincturæ Gum. Lac.* ʒ ℥. *Spir. Cochleariæ* ʒij.
Vini Rubr. ʒj. *Mel Elatin.* ʒ ℥. m.

Of the Ear. The Ulcers of the Ear, I mean its external Cavity, are commonly the Result of some preceeding Abscess or Apostemation: In the beginning of this Disturbance, or where a Tumour ariseth round about, with Inflammation, Pain, Pulsation and other Signs of Suppuration, the same is to be forwarded with a Cataplasm of the *Rad. Lill. Alb. cum Capis coctis*, or the *Fici pingues cum iisdem*, dropping at the same time into the Meatus a few Drops of the *Ol. Lil. Hyper. Chamel*; and, after the discharge of the Matter, you may digest with the same, or the *Ol. Lini vel Amygd.* But, in the use hereof, you must be cautious of persisting too long, for fear of corrupting the Tympanum, or Membrane underneath, and prejudicing the Hearing: Wherefore, so soon as the Abscess is well digested, you are to mundify with the *Decoct. Hord.* and *Mel. Ros.* after healing with the said *Mel*, liquified with the *Tinct. Myrr.* and dropped in two or three times a-day, blood-warm, as must all other Applications here, as well as to the Eyes.

But in the old, sordid, and stinking Ulcers of these Parts, or such as are attended with greater Putrifaction, some stronger and more deterfive Medicine must be instilled; such as a Decoction of the *Fol. Centaur. Agrimon. Hyperic. Absinth. Apij. Marrubij*, or the Juices of those Plants expressed, and being depurated, mixed up with *Mel Rosarum*; to which, according as the Sordes may require, are sometimes added the *Ung. Ægypt.* and, for the farther subduing the Stench and Putrifaction, the Tincture of *Myrrb* and *Aloes*.

The Ulcer being thus mundified, you may attempt the drying it up, after general Evacuation, with an Infusion or Decoction of some of the *styp-*

tic Plants, we prescribed above, for those of the Mouth and Throat; observing still, as we have but now hinted, that, in drying more particularly the old *Ulcers* of the said Parts, which are the proper *Emunctories* or Sinks to the Brain, you must carefully prepare your Patient's Body, by repeated Purgation, with some proper *Cathartic* of the *Cephalic* kind, such as the *Pil. fetid Cocchie Succin.* or the like; deriving the Matter also some other way, as by *Vesicatories* or *Fontanels inter scapulas*: at least placing one *inter bicipitem ac deltoideum* in the Arm, upon the drying up such *Ulcer* as aforesaid.

Ulcers on the outside of the *Jaw*, whether upper or lower, but particularly this latter, having a *Sinus* running towards the *Alveoli*, or Sockets of the Teeth, require oftentimes a narrower Inspection of the inside of the Mouth, than that of the external *Ulcer*; in the dressing whereof, you may happen to find your Labour lost, 'till some faulty Tooth, therewith communicating, is extracted, whence the Source of all the Mischief: And thus have I met with many scores of these *Ulcers*, some of several Years standing, which, upon removing such faulty Tooth, have healed in few Days after with a Pledget of dry Lint. If the said Teeth on the side affected do appear, upon the said Inspection, a like sound or rotten, that opposite to the *Ulcer* is usually the Tooth concerned, which is still plainer to be discovered, if, striking round about with your *Pblegm* or *Spaethula* on the sides of them, the Patient finds a Jar, and makes complaint when you come upon that Tooth; tho' generally its Looseness and visible *Cariosity* directs the Operator, where to perform his Office. *Benivenius* observes one of these cases of a *Callous Ulcer*, situate on the outside of the *Jaw*, where several Practitioners having,

A necessary Caution about the Ulcers of the Jaws.

but

but to no purpose, tried their utmost Skill, proposed a Cautery as the last Remedy. When he, being called into Consultation, observing the Site of the *Ulcer*, and its Communication on the inside, with the Socket of a rotten Tooth; ordered the same immediately to be pulled out, when the *Ulcer*, on the outside, healed in a few Days without farther Trouble.

Ulcers of
the Legs.

The remaining ones, of the *Trunk* or *Limbs*, require, I think, so little variation in the Cure, from what we have delivered of *Ulcers in General*, and the particular kinds of them, that we shall have less need to enlarge thereon: Only taking this Notice, that the *Ulcers* on the Legs, those particularly which are subject to great Pain, Inflammation and Flux of Humours, and more especially in dry Habits of Body, will not bear the common Digestives, used in those of other Parts; upon which account you will be often obliged, in the superficial Ulcerations, to dress with some *anodyne* or lenient Medicament, as the *Ung. Diapompb. Tutie*, or, which excels all others, my *Cerat. de Lap. Calam.* and where the *Ulcer* is sordid, remaining crude and undigested, I usually mixed a small quantity of the *Præcipitate* therewith, if the Tenderness of the Part would not admit of strewing on the same, and first going over lightly with a Feather dipped in the warm *Liniment of Arceus*, (*Basilicon* being scarce allowable, especially about the Shins) laid on the said Application with a Pledget of Lint, embrocating round about *cum Ol. Ros. vel Ung. Sambuc.* or a defensive Emplaster as an Intercipient, with suitable Bandage, injoining Rest with a due Position of the Limb, if not in Bed or upon a Couch, lying along, at least upon some Chair or Stool, near a level with the Trunk of the Body.

SECT.

S E C T. VII.

Of Fractures in General.

T the beginning of our *First Section* we did observe to you, that the Practice of *Surgery* was principally employed about *Tumours, Wounds, Ulcers, Contusions, Fractures* and *Dislocations*: The three first of which have already taken up our six preceding *Sections*; the fourth, I mean *Contusions*, I have formerly noticed in another Treatise, *i. e. a Discourse of the Skin-Diseases*, where the same happen to be *cutaneous*, in the ninth Chap. Part II. under the Names of *Echimosi*, *Echimoma* vel *Sugillatio*: So that, having neither Leisure nor Inclination to repeat here, what I have there delivered: I will only add some short Hints, by way of farther Instruction upon this Subject, and proceed to the *Fracture*, which take as follows, *viz.*

- i. That in all *Contusions*, where there is Extravasation of the same to be feared, but especially of the Head, Breast or Belly, the Patient must presently be let Blood, according to his Age, Strength and other attending Circumstances, whereby not only the Vessels being emptied, may be readier to suck up the diffused Liquor before it stagnates, but the Consequents of Pain and Fluxion, or the Tumour and Inflammation likewise prevented: At the same Instant you are to apply some suitable, repercussive Medicine, that may inhibit in somewise the Course of the inflowing Blood, shut up the Mouths of the distor-

A Digression about Contusions, and the Method of Cure.

ed *Capillaries*, and prevent the spewing out any more of their Contents, round about the Parts contused.

For this purpose serve the common Defensative of *Diapalma*, *Bolus Verus*, *Acet. Vin. ac Ol. Rosar.* formerly mentioned: *Embrocations* also, *ex eodem Aceto ac Ol. Myrtil. Epithems* of *Oxycrate cum Alb. Ovor.* or thickened with *Bole*, and applied Plaster-wise; *Cataplasms* prepared for the Decoction of the *Rad. Symplit. Bistort. Tormentil. Fol. Plantag. Equiset. Burs. Pastor. Cort. Granat. Flor. Balaust. Fol. Rosar.* in red Wine, or the Smith's Water from the Forge; after thickening with Bean-Flower, and a little fine *Bole* interspersed.

In simple *Contusions* of the Head, especially of young Children, *Arantius* directs this following, which he calls *Remedium Benedictum*; having covered the Parts with soft Bolsters, wrung warm out of a Mixture of the *Alb. Ov. cum Aceto Rosar.* and renewing them as they dry for twelve Hours, this *Cataplasm* is to be laid on:

℞ *Pulv. Fol. Ros. Rub. Fol. & Bac. Myrti* ā ʒi. *Farin. Fabar. & Hord.* ā ʒ ℞. *Absinth. Beton Pulv.* ā ʒij. *Cymin. Pulv.* ʒ ℞. *Mel. Virg.* ʒi. *Vini nigri austeri* q. s. ut f. *Cataplasma*, cui adde *Ol. Ros. & Chamomel.* ā ʒ ℞.

2. You must take notice, that this Method be used only in recent *Contusions*, or whilst the Disease is, as we say, *in fieri*; lest otherwise, where the Blood has been long extravasated, or thereby deprived of its native Heat and Fluidity, and render'd incapable of returning, it may be faster lock'd up; and, turning into *Grumes*, putrify in the Parts, producing *Gangrene* and *Mortification*; at which times you are to mix *Discutients* with some moderate *Restringents*; the former to set open the

the Pores, for breathing forth any Humour stagnis'd and impacted; the latter to constringe gently the Mouths of the Vessels ruptured, and prevent any farther Effusion of their Contents. That the Blood thus effused may pass the sides of the Vessels, after Stagnation therein, the ingenious Mr. Cowper has rendered demonstrable, even to the naked Eye, by an Experiment communicated to the R. S. as you may find in the *Abridgment* of their *Transactions*, Vol. IV. p. 129.

And for this end also a Fomentation may be prepared *ex Summit. Centaur. Min. Hyper. cum Flor. Chamomel. Rosar. Balaust.* decocted in red Wine or the Steel-Water, which in like manner may be thickened into a *Pultis* with the *Farin. Fab.*

3. Where there is great Effusion of the Blood, and little likelihood either of repelling or discussing thereof, you are by no means to wait for *Suppuration*; but, having satisfied your self, that the Extravasation proceeds not from any ruptur'd Artery, or that there is no *Aneurism* in the Case, (to be gathered from what we have before delivered of that Disease,) you must open the Tumour, and give vent to the serous Humour or Blood coagulate; afterwards digesting the Wound, and proceeding, as when complicate with *Contusion*, we have also directed.

4. As in those of the Head, all possible Caution and Circumspection are required, by reason of the *Cranium* and the Brain underneath; so also, in those of the Joints, you must take all suitable Precaution, by large Bleeding, defensative *Topics*, spare Diet; and keeping up the Limb, to prevent the Afflux of Humour, more ready to fall down upon these more sensible, *tendinous* and *nervous* Parts; taking especial Care that you are not deceived, mistaking the simple *Contusion* for a *Luxation*;

tion; by which, like those roguish *Impostors*, who call themselves *Bone-setters*, but are more properly *Man-slayers*, if not *Murderers*, pulling and hawling the Limb already affected with Pain and Fluxion, instead of helping and relieving, you maim the poor suffering Patient, laying hereby Foundation for some *Abscess* and *fistulous Ulcer*, ensuing afterwards with rotten *Ligaments* and *Tendons*; and if not a *Cariosity* on the Bones, which frequently falls out, at best of stiff and feeble Limbs, for their whole Lives after.

5. Lastly, In the *Contusions* of the Trunk and Belly, called otherwise the *Venters*, your chief Recourse must be to the Physician, who, by *traumatic*, *agglutinative* and *balsamic* Prescriptions, such as were laid down in our Discourse of the Wounds of the said Parts, may contribute to the Cure: Some Forms of which, beside what are here directed, you may find in the Tract before referred to, which being diligently administered, in order to preserve the Fluidity of the Blood, and hinder its Stagnation, it has been also customary in extraordinary *Contusions*, to enwrap the Body, especially the bruised Parts, in the Skins of Animals hastily flea'd off, and applied with their natural Heat, being renewed for three or four times at proper Intervals: To which Experiment, I must needs say, I had great Reason to impute the speedy Recovery of an *hypochondriac* Gentleman, who had thrown himself from a Window two Story high, and lighting first on a Pent-house, fell thence upon a Stone-Pavement, without *Fracture* or *Luxation*: But, quitting this Subject I come now to entertain you with my account thereof.

The Fractures de-
fin'd.

The word *Fracture*, as used by the Surgeons, and I think it is not so often by others, implies a Solution

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a Solution of the Continuity in the hard Parts of our Bodies, called the *Bones*, from some outward Violence offered thereunto, as by *Falls, Blows, Jumping, Leaping, nay a Slip of the Foot upon a plain Floor, the Leg being thereby somehow distorted, and falling under the weight of the Body above it, has been sufficient to snap the Bones asunder.*

The *Rupture* is, with some, of the like Import; but as Custom has appropriated the former to these Accidents of broken Bones, so by the latter is understood, among the same Artists, a Breach or Rent in the *Peritoneum*, as we observed formerly in our *Section* of Wounds; where we acquainted you that both *Hippocrates* and *Galen* have given that Name, *i. e.* of Wounds, even to these *Solutions*, as well as those in the softer Parts.

But, quitting controversial Disputes about Names, where we understand or know the thing signified thereby, we shall stay only to inform you farther; that as those in the *Flesh* were differenced by their *instrumental* Cause, so the *Solutions* of these also, from their *Efficients*, have had various *Greek* Appellations: Thus, that made by a *cutting* Instrument, was called *Τραῦμα, Vulnus*; those by *Erosion*, *Τερήσιον*, from a Worm of that Name, as before noticed; and those by *Contusion*, *Κάτασμα*; which last usually comprehends the rest, and the Applications to promote their Union, and engender a *Callus* about their broken Extremities, are thence named *Catagmatica*.

The Causes of *Fractures*, we have already observed to be some outward Violence, tho' the extraordinary Fragility of some Persons Bones, beyond others, must arise from a Cause internal; such as their too great Siccidity, or lack of Oil, consumed by long Sickness or old Age. The too

Causes.

frequent use of Mercury, we are told, will render these Parts brittle.

- HIST. 13. *Marcellus Donatus* reports, that a Person going to throw the half of an Orange at his Companion in their Sport, by the meer projection of his Arm, fractured the same; and, before he was recovered, putting his other out of Bed, to reach his Chamber-Pot, broke that also; which he imputed to a mercurial Unction, he had lately undergone for the *Lues* he had long laboured under: So that, very probably, that Disease itself, by vitiating the Juices of the Blood, might not a little contribute thereto, as may be inferred from the Texture of these Parts thereby destroyed in the *Spina* and *Exostosis*.
- HIST. 14. *Capivaccius* acquaints us with another, who broke his Arm as he was throwing a Nut against the Pavement, in order to come at the Kernel.
- HIST. 15. *Camerarius* of a third, using a Hammer upon some trivial Occasion.
- HIST. 16. But the most surprizing Instance of this Fragility, which I have heard of, is that recited by *Hildanus*, Cent. 2. Obs. 66. who there informs, that the *Os Humeri*, a large and strong Bone, was fractured in two Places, by only drawing on a Glove.
- HIST. 17. On the other side, the Relation of *Fernelius* is as remarkable, of a Soldier, who, after a Fit of Sickness, had his Bones so mollified, that, like soft Wax, his Arms and Legs would bend any way without breaking; who was cured, as the same Author informs us, of this Misfortune, by bathing in the *Aluminous Waters*.
- HIST. 18. *Forestus* speaks of a young Girl, whose Arms, from the Cubit to the Shoulder, were as soft, being no way ossify'd; which, after some time, were set to rights, with restraining Applications,

Splint,

Splint, and Bandage. But we shall now speak of the Differences of *Fractures*.

The general Division thereof is into *simple* and *compound*; by the former meaning a Solution of the Bones, without a Division of the Continuity in the Flesh or Skin above; by the latter, in both, or a *Fracture* complicate with a *Wound* in the outer Coverings.

Now, tho' I think the *simple Fracture* thus understood, when accompanied with any dangerous Symptom, as *Erysipelas*, *Convulsion*, *Gangrene*, and the like, may be properly enough said to be *compounded*; albeit there is no Breach in the outward Tegument, yet will I not find fault with this general Division of the antient Practitioners, which still takes place among us.

Of *simple Fractures* there are divers, not now to mention those of the *Cranium*, which has some more peculiar to it self, as we shall observe when we come to speak of *particular Fractures*: The more usual I reckon the *Tranverse*, the *Oblique*, the *Longitudinal*, the *Semifracture*, and the *Fracture* with *Comminution*.

The *diagnostic* Signs of which, especially those made tranverse, oblique, and, more particularly, that with *Comminution*, are often discoverable to the naked Eye, upon the comparing one Limb with the other; when on the fractured Part, some Prominence on one side, and Hollowness on the side opposite, or an Inequality, is espied by an exact Surveyor: But a strict and prudent Handling of the broken Limb enables us to make the best Judgment, not only as to its Realty, but of what sort or kind; for while the same is supported by an Assistant, if you press with your Hands up and down, bearing with one towards, with the other from you, both upwards, down-

*General
Diagnostics.*

wards sideways, you will not only observe the crushing of the ends of the Bones, but continuing your Enquiry with your Fingers, unless it be buried deep among the Muscles, as the *Os Femoris* in some corpulent and full Bodies, you will discover the Site of the *Fracture*, and Extent of the same, whether pointing obliquely under the Muscles and Skin above, or tranverse or across the Limb.

The *Comminution* will not bear this Scrutiny, nor requires it, since the very lifting up the same puts the poor Patient on the most dire Complaint, through the shivered Angles of the Bones, pricking the muscular and nervous Fibres, whilst the Limb it self makes a kind of Curve or Angle, upon such Elevation.

The *Fracture secundum Longitudinem* is rarely met with, in comparison with the other, (I cannot say, that in more than twenty Years, for the greatest part of which time I have seldom had fewer than four or five, of one kind or other, at once under my Inspection) that I have met with more than two, that I could really think such. However, the Patient's Complaint throughout the whole length of the Limb, with the unusual Fullness from one extreme to the other; if the Cleft be not perceptible to the strict Impression of the Finger along the same, together with its Inability; when the Leg or Thigh, to support the Trunk of the Body in the erect Posture thereof, without Complaint, give farther Jealousy.

And being now discoursing of the *Diagnosics* of *Fractures* in general; I cannot pass by unobserved that vulgar Error, of the Patient and By-standers, who will not allow a Limb to be broken, whether Leg or Arm, if at the same time they can move their Toes and Fingers; as if the Bones, which of themselves are immoveable, un-

assisted

assisted by the Muscles and their Tendons, and afford only Stability, were concerned immediately in voluntary Motion, which is the peculiar Function of those other Parts, when influenced by the Fluid of the Nerves.

On the other hand, such is their Incogitancy and Imprudence, that upon some Wrench or Distortion of the tendinous Parts, by which such Motion is now render'd painful and difficult, you can hardly persuade but their Bones are broken: And unless at sometimes you countenance this their Prepossession, which is much beneath a Man of Art, who regards his Honour and Reputation, they will not, without great difficulty, be persuaded to confine, or keep up their sprained Limbs, as they ought, on Account as they surmize, of so simple an Accident; little considering such simple *Sprains*, as they term them, being at first neglected, or ignorantly treated, have ruined and lamed more than the real *Fracture* or broken Bones. And this for the *Diagnostic*.

The *Prognostic* of these Accidents is to be taken from their *Figure*, *Situation*, and *Complication*: And thus the simple transverse *Fracture*, is easier of Cure, and less hazzardous than the oblique.

From their *Site*: So *Fractures*, in or near unto the *Joints*, are more dangerous, and attended with worse *Consequents*, than when happening about the middle of the *Bones*, or farther from their *Extremities*. *Fractures* also of the *Cranium*, or *Skull*, are never void of *Danger*; not so much as *Fractures*, but through the *Vicinity* of the *Membranes* of the *Brain*, and the *Brain* it self underneath, with the dire *Symptoms* consequent to those *Parts* injured or hurt thereby: But of these more particularly, when we come to speak of the fractur'd *Cranium*.

Fractures

Fractures of the *Ribs* are also troublesome and hazardous by reason of the adjoining Membrane of the *Pleura*, at such Times disturbed thereby, and subject to Inflammation.

Fractures of the *Os Femoris*, happening especially on the upper Part, are also difficult to be replaced, and secured therein; for that a Number of large Muscles so envelope this Bone, as to render the Reduction thereof troublesome, and to keep them in their Places after such Reposition; so that it will always behove the Artist at these times, to be cautious in his *Prognostic*, or how he promises a compleat Cure, without that common Event of one Leg a little shorter than the other, and wanting the Heel of the Shoe to be raised for supplying this Defect of an equal length: In the broken Thigh it being rare, let the Surgeon do the best he can, unless in Children, who often escape better, to find these Accidents terminate without some Limping.

From their *Complication*, and thus all *Fractures* accompanied with a *Wound*, and more especially those by *Gun-shot*, or *Fire-Arms*, are manifestly more dangerous than the *simple*, whether *transverse* or *oblique*: Also those attended with great *Contusion*, large *Tumour*, *Inflammation*, *Abscess*, or the like, are much more hazardous, than where no such Symptoms supervene.

Lastly, the *Fractures* which happen to the *venereal*, *scorbutic*, *bestic*, *hydropic*, or the *cachectic* or *cachochymic* Habits, are always worse, and more dangerous, than when befalling a better, firmer, or sounder *Temperament* or *Constitution*. Also *Fractures* of pregnant or great-bellied Women are more difficultly united and consolidated than others.

Hildanus

Hildanus tells us, he spent ten Months time in attending a Woman with Child that broke her Leg, before he could get a *Callus* to hold the Bones together: All which time he was forced to bear her Clamours, whilst he did his utmost for her Recovery. The like Account he gives of another, where, after twenty three Weeks, he found the Bones still loose, through the nutritious Juices at these times, as he rationally surmised, being carried off from the other Parts to nourish the Foetus. Come we now to the Cure of *Fractures in general*.

HIST. 19.
and 20.

In which I reckon two more particular *Indications*, viz. The *Reposition* of the fractured Parts, and their *Retention* when re-placed, till *Nature*, by the Intervention of a *Callus*, has cemented their Extremities: In order to which, I shall lay before the young Practitioner the following *Apparatus*, which he is to set by him in a large Dish,

Cure of
Fractures
in general,
and first of
the simple
one, with
the Appa-
ratus.

on a Stool or Table by the Bed-side, that the same may be more ready at hand: 1. A *Plaster-Compress*; 2. A *defensative Emplaster*; 3. A couple of *Bolsters of Cloth*; 4. A *Roller*; 5. *Splints*; 6. *Tape*; 7. A *Bason of Oxycrate beat up, cum Alb Ovor*. 8. A *Pair of Scissars*; 9. A *Penknife*; 10. A *Pin-cushion with Pins*.

These being Pre-requisites for the Reduction of simple *Fractures*, at least what I found necessary in my own Practice, I shall deliver a few Words, by way of Explanation, concerning each of them.

Having before-hand examined the *Fracture*, and discovered what Parts of the Bone protuberate, or are likely to do so; let your *Plaster-Compress* first recited, and prepared as we have formerly advised, be well fitted to the rising Part, that it may the more exactly compress the same, after the reduction of the *Fracture*, and prevent its starting

starting up again: At the time of taking this Survey, you may likewise observe the compass of the Limb broken, with its depth from an Inch or two below the upper Joint, to as many above the lower, supposing the *Fracture*, near the middle, whether of the Leg, Thigh, Wrist, or Shoulder-Bones; by which you may guess of what length and depth to shape your *Defensative*, prepared *ex Diapalma, Bolo Vero Ol. Rosar. ac Aceto Vini*, handsomely adapting the same in its Dimensions.

The *Bolsters* are to be prepared of fine soft Cloth, two or three times folded, of a depth suitable to your Plaster, rather deeper than otherwise, and of such breadth, that, being laid on each side of the Limb, they may almost encompass it.

The *Roller* is to be double or single-headed, of length and breadth suitable to the situation of the *Fracture*, and compass of the Limb. The Antients used three separate *Rollers* for *simple Fractures*, whilst the modern Practitioners generally content themselves with one, and that single-headed: But, in *Fractures* of the Joints, I have found sometimes, the *double headed* preferable, as more regularly compressing the fractured Parts, and retaining them in their proper Places, where there is no room for the Application of *Splints*; but only the *Cloth-Compress* dipped in *Oxycrate cum Alb. Ovor.* and wrung out, which, after some Hours, growing hard and dry, in some measure supplies their Places.

The *Splints*, which I prefer upon these Occasions, are those prepared by the *Card-maker*, for the Use of the *Hot-presser* and *Packer*, of pasted Paper, of which I was never without half a dozen of Setts for the Wrist, Arm, Leg and Thigh, ready shaped to Limbs of several Sizes, and beat
down

down at the Edges; which sit much easier, and more securely too, than the *Sword-Scabbards* used by some, or the flat Past-boards dipped in *Posca* at the time of Using, and then fitted to the Parts.

These *Splints* are to be much of the same depth with your *Bolsters*, but rather shorter, to prevent their Edges offending the Skin either above or below, of such Breadth, as that two may comprehend the Arm above the Wrist, three above the Elbow, of large or full grown People; as many for the Leg, and four for a Thigh.

The *Tape* is for tying your *Splints* close, beginning in the middle, and then fastening one above, and another below; for which, and other Purposes to be mentioned presently, you are to provide your self of several Yards, narrower or wider, as the Bulk of the Limb requires.

The *Oxycrate* is for dipping in your Cloth *Bolsters*, and sometimes your *Bandage* also, after expressing the Liquor, rolling up the one tight, and laying the other spread out smooth thereby.

The use of the *Pins* I shall not enlarge on, being well enough known for fastening the End of the *Rollers*; nor yet of the *Scissars* or *Knife*, which are always to be in Readiness: The first to cut off the Ends of the Tape, to rectify any thing amiss in the Compress or *Bolsters*; the latter to remedy the too great length or breadth of the *Splints*, or shape them to the Parts for which they are intended.

This, as I have found necessary, was my own *Apparatus*, at these Times: And being thus provided for your Work, supposing the Leg fractured, the Patient laid carefully in his Bed, with the same resting on a soft Pillow, reaching from the Heel somewhat higher than the Ham, let your two Assistants, fitted for the Work both in Strength
of

of Body as well as Presence of Mind, be placed one of them at the Foot, the other at the Knee: The former with his left Hand under the Heel, and all the Fingers of the right on the top of the Instep, the Thumb bearing against the Sole of the Foot; the latter with the Fingers of both about the Gartering below Knee underneath, with his Thumbs opposite on the Top of the Leg; this being the best Hold, where the *Fracture* is near the Joint of the Ankle: But if in the midst of the Leg, or higher up towards the Knee, the Gripe, by your lower Assistant may be made round the Small of the Leg, after the Manner as above; whilst a third Person supports the Heel, if there be occasion.

Let these, I say, be so placed for their own Ease also, as that they may best continue in the stooping Posture, without wrigling or shifting the same, till the Work of Reduction is dispatched.

Your Assistants being thus fixed, you are to order the Limb gently and equally to be raised by them from the Pillow, that you may have Liberty, with your Hands and Fingers, to examine all round about the *Fracture*: When having, by such Enquiry, satisfied your self therein, as whether *transverse* or *oblique*, of one or both *Focils*, let the Extension be begun by one, and the counter-Extension, by the other, at the same Instant: The Leg having been before so put into their Hands, that the great Toe may be opposite, or in a direct Line to the *Rotula*, or Knee-Pan. During their Extension, it behoves the Surgeon to have his Eyes, as we say, about him, as well as his Fingers, with which, when he finds the Extension sufficient to bring the *fractured* Extremities upon the level, without shivering the same, let him

him strait press down the rising or protuberating Parts into their proper Places, which he will find more readily to give way, if, during the said Extension, with the Palm of the Hand he pull to him the Part depressed, and with the other thrusts from him that which is prominent.

This failing, if the Extenders are neither cramped nor tired, let him give order for the Extension to be encreased both ways, or at both ends of the Limb, when again, with his Hands encompassing the *Fracture*, let him strongly press together the divided Extremities, sinking down the rising Parts, and raising, as before, the depressed: And finding them hereby replaced, let him again strictly examine with his Fingers, and see that he leave no Prominence or Inequality before he dress up: As a farther help to his Judgment at this time, let the sound Leg lie bare before him, that by exact Comparison, he may observe their Correspondence, which is truly necessary: Otherwise, if that Leg was bowed or crooked before the Hurt, you are not to alter the pristine Figure thereof; for, by attempting to make such Limbs strait, if you could accomplish the Work, your Patient would be little obliged, in that as much as you take away from the wonted Curve of such a Limb, however they might happen more slightly, yet so much you would deprive them of their Stability or former Strength; the extreme of the upper Bone now bearing, perhaps, not more than the one half upon their Base, the lower; which is the like Injury to them, as your leaving a crooked Limb would be to one, which, before the Hurt received, was strait.

But I forget your Extenders, who by this time, not improbably, may be cramped in their Postures,

fures, as well in their Hands as Backs (which I have often been) in stooping to help you: Wherefore having finished the Reduction, to your own Satisfaction and the Approbation of the By-standers, who are sometimes proper Witnesses thereto, when your Patient, by some after-irregularity, has displaced your Work; let your Assistants be encouraged to hold out but a few Minutes longer, till your Dressings are dispatched, which being all ready at the Bed-side, as we before gave Direction, or the Dish wherein they lie held to you by a Servant, first lay on your Plaister-Compress upon that Part which just before lay prominent, to prevent its rising; then, gently drawing your Defensative under the Limb, bring up the two ends thereof somewhat streight, which may lap over an Inch, for the better security of the Compress, and adhesion of your Plaister: Over this you are to take two or three turns with your *Roller*, first a-cross the *fractured* Part, for staying of the Bones; when having spent about one half, both above and below, lay on your *Bolsters* of Cloth, wrung out of *Oxyrate & Alb. Ov.* on each side, at the top and bottom, as the Situation of the *fractured* Bone, and the bearing Parts thereof shall require, and continue over these, so many Circumvolutions of the remainder of your *Roller*, as you shall find expedient and needful, always a little streightening when you come upon the *Fracture*, and turning your said *Bandage* at the rising Part or Calf of the Leg, for the smoother and more even management thereof; which being past to the gartering-Place below the Knee, you may come down again with the Remainder, and fasten about the midst of the Limb: When, with all necessary Dispatch, for the ease of your Assistants, apply next of all
 your

your *Splints*, the first to bear upon the Compress, the second somewhat opposite, and the third or fourth, if occasion so require, in the Interspaces, which, fewer or more, are to be of such compass, as, leaving near a Finger's breadth distance between each other, they may surround the broken Limb, over the Dressings applied as afore-mentioned.

When I said the second *Splint* must lie opposite to the first, I meant not in its whole width; but that a part thereof should bear against the *Fracture*, as a Counter-pressure to the first: The third being so placed, where there is no more required (which there seldom is; if these are aright ordered) that together, at an equal distance, they may encompass the Leg, as above-recited.

Next, passing under your first Tape in the middle, whilst some other Attendant secures, with their Fingers, the *Splints* as you had placed them, you are to tie them close; and making a bow-Knot, cut off the Ends of the Tape: Proceeding in like manner to make two other Ligatures above and below, which being finished, and your Pillow laid smooth, let your Extenders, who by this time, are willing to be released, equally and gently sinking their Hands together, lay down the Limb thereon, with the great Toe still answering the Top of the Knee; when bringing the sides of the Pillow close with three Tapes more, passed before-hand underneath at equal Spaces, tie over the same; having first placed a little quilted Pad hallowed for the reception of the Heel, which is a Part, by reason of its Tendon long compressed, as much complained of; sometimes more, than the *fractured* Parts themselves: And I have known not only Inflammation, but Mortification sometimes to have ensued, for want of such Provision and timely Oversight; which has created very

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much disturbance to the Patient, and great trouble to the Surgeon, to get whole again.

A Strap of Cloth is now to be cut, which we call the Bridle; and which, before the ends of the Pillow are pinned, or otherwise fastened together with Tapes sewed on for that Purpose, is to be placed with its middle against the Sole of the Foot, and the two ends interchangeably passed over the Top of the Instep, then pinned to the sides of the Pillow, for securing a good posture of the Foot, from whence we judge somewhat about that of the *Fracture*.

On the sides of this Pillow, are laid the Junks, which with the Cradle we mentioned not among the *Apparatus*, because the Limb being now safely reposed, and the broken Bones secured, you have leisure to provide these Necessaries, altho' they also ought to be at hand.

These *Junks* are made commonly of two small bundles of Rushes, sewed up in Linnen-Cloth, of about an Ell long each, and as thick as the small of the Leg: Their Use being to support the sides of the Pillow, and to keep the same, with the Leg therein, from inclining to either side.

Lastly, the *Cradle*, which is to bear off the Weight of the Bed-Cloaths; being made of three or four semicircular Hoops, let into two square pieces of Wood, of a Yard long, somewhat wider at that end next the Knee, and narrower towards the Foot, of such breadth, as may take in both the *Pillow* and *Junks* aforesaid.

Instead of these, when I had much of this Business on my hands, I have wrapped up a couple of small Sheets, or two Table-Cloths, or, for want thereof, a sufficient number of Towels, Napkins, or the like, and, rolled them up hard, placed

placed them on each side the Pillow, to serve as *Junks*: And to supply that of the *Cradle*, I thrust a Skuer through the Blanket at the Feet of the Bed, just over the Patient's Toes, fastening it with a Tape or piece of Packthread to the Curtain-Rod, which kept the Cloaths at such distance, as to secure both Foot and Toes from being pressed upon thereby: Then bringing over the outward Covering, whether Rugg or Quilt, I fastened them in like manner at the Bed's-Feet, to keep out the Cold.

I hope it will not be expected, that I should give any other *Specimen* of the *Apparatus* for, or Manner of reducing simple *Fractures* in general; since what has been already laid down will serve for those of the Thigh, as also for the Arm, whether above or below the Elbow, with little Variation; in this latter, there being seldom occasion to confine the Patient to his Bed, since by placing the same Pillow in a Napkin, reaching from the Fingers ends to the *Cubit*, the Wrist is well enough supported: But if the *Fracture* is above the *Cubit*, as on the *Os Humeri*, the safest way for him is to keep in Bed, at least for some Days, with a Pillow lying along the outside of the Arm, for its steady Support, which at these times is not so well provided for, in the erect Posture, as by the *horizontal* in that below.

Having reduced your *Fracture*, unless you had bled your Patient before, it is very expedient; that you take off such quantity, as the Age and other Circumstances may allow, whereby to lessen the Afflux of Humour, and keep under the *symptomatic Fever*, usually consequent upon these Accidents, and more especially in some morbid or diseased Habits, also those *Fractures* which are attended with great *Contusion*.

As to his *Diet*, let the same be like that directed for wounded Persons heretofore, *viz.* *Panada*, *Water* and *Barley-Gruel*, *Chicken* or small *Mutton* and *Veal-Broths*, avoiding strong Drink and Wine, which Abstinence must be continued, at least for the first Week, till the Fever and Fluxion go off; afterwards a greater liberty may be allowed, such as *Flesh* easily digested, whether *Chick*, *Rabbit*, *Lamb* or *Veal*, for those used to feed well; as also strong Drink and Wine, but sparingly, to the good Fellows: By which a suitable Chyle may be generated, from whence a sufficient Stock of nutritive Juice, to supply Materials for that expence of the same, thrown off by the Pores at the Extremities of the fractured Parts, for the Generation of *Callus*.

And here give me leave to observe, what I formerly remark'd, in discoursing of the true *Hernia*, that the Practice of giving strong *Jellies* of *Calves-Feet*, *Cow-Heel*, *Trotters*, and the like, and the constant feeding upon these *Extremities Animalium*, is a doubtful Practice, being liable, by their viscid Particles, to obstruct the *Lacteals* and Pores they are to pass, before they are assimilated, especially at a time when no Exercise can be used for their farther Attrition, or grinding into such *Molecule*, as may fit them not only for Progression to the Parts, but to the Pores also where they are required: Or in other Words, I think these slimy and gelatinous Foods, thus constantly taken, not so well adapted, as by admixing between whiles an agreeable Juice prepared by the Stomach, of the musculous Parts, or *Flesh* itself of some of those Animals.

Besides their common Diet, by way of Nourishment, where the *Callus* is long in forming, our Authors sometimes prescribe certain Medicaments

ments to be used, both outwardly and inwardly, unto some of which they are ready to attribute a peculiar Faculty of engendering the same: And among these, the Precedence, I think, is given to that famed *Catagmatic*, the *Ostrites*, called otherwise *Osteocolla*; of which the experienced *Hildanus* writeth thus, in his 3d Cent. and 90th *Observ.* *Catagmatics, among which the Osteocolla and its Description.*

“ In a large champain and sandy Ground, near
 “ *Darmstad* in *Germany*, I found many of these
 “ Stones, some of them above, and others under
 “ the Ground, the former, lying exposed to the
 “ Air, seem to lose much, if not all their glutin-
 “ ating Property, by which they become brittle,
 “ hard and whitish; whereas those taken
 “ under the Surface, where I found them some-
 “ times two or three Foot deep, are softer, brown-
 “ er and friable, as also more viscous and bitu-
 “ minous: But as the Ground is sandy where
 “ they lie, upon frequent Showers falling, their
 “ Covering is in time washed off, and they then
 “ lie exposed above-ground, where, by the Heat
 “ of the Sun, they are not only whitened and
 “ made hard, but their Glutinosity, as before
 “ observed, very much, if not entirely destroyed,
 “ having nothing but their terrestrious Parts re-
 “ maining: Some of them arise from a Basis with
 “ Shoots, as Branches from the Roots of Trees;
 “ some of them I found solid, others fistulous,
 “ in which a soft, but blackish or dirty Pith was
 “ observeable, somewhat resembling the Marrow
 “ of Bones.” From which our Author conjectures
 the first Hint might be taken of their Bone-ce-
 menting Property.

The Accounts from *Mattbiolus* and *Josephus*
Quercetanus, agree also with the foregoing, viz.

“ There are found in that Tract of the *Rhine*, which the *Germans* call *Bergstrass*, near the Town of *Darmstad*, about two Miles from the *Rhine*; certain Stones, &c. The *Germans* call them *Bienbruch*, for in four or five Days time, a broken Bone is fastened and joined together by their Use.”

HIST. 21. Now altho' our famous Practitioner above-mentioned, gives no great Credit to the vulgar Relations of the Virtues of these Stones, yet he assures us, he had found great Service, as well from their outward as inward Use, in forwarding the Agglutination of a broken Arm, of a very antient and decriped Person, where he found the *Callus* loose at a Month's end: And that in a fractured Thigh of another Person, he was forced to leave off its Use, by reason of the super-abounding *Callus* occasion'd, as he believ'd, thereby.

To the first of these he gave daily two Drams of the following Powder, in a Mess of good Flesh-broth.

℞ *Lapidis Ossifragi sive Osteocolle diligenter præp.* ʒij.
Cinnamon. Elect. ʒijj. *Sacchar. Alb.* ʒij. m. f.
Pulvis tenuis.

Twice a-Day he also used the following Lini-ment:

℞ *Ol. Lumbric.* ʒij. *Ol. Gran. Junip.* ʒij. *Suc. Lumbric.* ʒi. m. pro Litu.

After which this Emplaster was worn upon the Place.

℞ *Empl. Vigonis ad Fracturas Ossium* ʒij. *Oxyer.* ʒ ss.
Lapid. Osteocol. pp. ʒi ss.
Lumbric. terrest. in subtilis: Pulv. Redact. ʒj. cam
q. f. *Ol. Lumbric. f. Emplast.*

To

To the same end likewise, other *catagmatic* Emplasters are prepared *ex Pulv. Rad. de Sympbito, Bistort. Aristoloch. Ossium Human.* and the *Ostrites* aforesaid, made up with the *Resina vel Terebinth. Ven.*

As to my own Opinion of the *Bone-Binder* in Cases of *Diarrhea's*, or other Fluxes, accompanying these Accidents, where the Texture of the Blood is weakened by Sicknes, or where there is Colliquation otherways attending, and the nutritious Particles carried off either in profuse Sweats or Loosenesses, I look upon this Medicine as an excellent Agglutinative, or good Styptic, if it can be procured true and genuine, chosen by our Author's advice from under-ground, and carefully kept from the Air: And I would recommend it to be given as above, with a Decoction of some of those *Vulneraries* we recited in our Third Section, discoursing, as I have already hinted, concerning *Hernie*.

But these Occasions do not often happen, that we should deviate from the common *Regimen*; and yet I have met with one so very remarkable upon this account, that I shall think it worth while to inform you thereof.

A Gentleman's Coachman, then of St. Hellen's HIST. 22. Parish, within *Bishopsgate*, by a Kick of one of the Horses, had the *Humerus* broke off in the Middle, betwixt the *Cubit* and the Top articulating with the *Scapula*: Upon which, after the Reduction, I continued him in his Bed, and at ten Days end, finding all things appear well for the Time, dressed up again with a mild *Cerate*, instead of a *Defensatroe* I had applied at the first Dressing, still persuading him to keep his Bed, yet granting a larger Liberty in his Diet: But at three Weeks end, whether from any Error there-

in committed, or getting cold in his Rising, altho' I rather think it was an Effect of his ill Habit of Body, or *scorbutic Dyscrasy* of the Juices of his Blood, he fell into a Flux of the Belly; which, notwithstanding all Endeavours by an *Elect. ex Conf. Ros. Conf. Fracast. Pulv. Rhei Torrefact. Coral. pp.* with the *Decoct. C. C. C.* for his Drink, and other Methods prescribed by his Physician, so prevented our Endeavours to unite and confirm the *Callus*, that at six Weeks end, (a sufficient Term for consolidating the largest Bone in a humane Body) when we thought all safe, one Evening, as he was helped off with the Waistcoat-Sleeve on that side, it seemed to him that his Arm was again falling to pieces: However, being still kept tight and close by the *Splints* and *Bandage*, he went to Bed; and the next Morning, throwing his Cloaths over his Shoulders, in great Surprise, came to my House, where I had no sooner loosened the Dressings, but I found plainly the *Callus* was entirely dissolved, the Arm swinging back and forward, as if there never had been any Stay or Stability besides the Muscles.

I was indeed as much alarmed my self, and did all in my Power to retrieve the poor Fellow's Misfortune, dressing up with a *Catagmatic Empl.* of the *Stypt. Paracels. Diapalm. ad Hern.* with some of the conglutinating Species melted down therewith, directing at the same time the *Pulv. Osteocol. cum. Syr. de Sympbito*, for some Weeks longer.

At length, finding all to little or no purpose, his Master, Mr. *Prideaux*, sent him to St. Thomas's; where, after other ineffectual Attempts for his Recovery, I understood, that Mr. *Rydout*, whose Patient he was, whip'd off the useless Limb, in the Interstice of the broken Extremities, without more to do; and, healing up the Stump, dismissed

missed him: His Master procuring for him afterwards a *Letter-Carrier's* Place, by which he was subsisted several Years, till his Death.

In ancient People these Accidents are less admirable: I remember I was once desired to look upon an old Alms-Woman, upwards of eighty Years, who, at three Months end, had a fractured Thigh as loose as at the first Day of the Misfortune, and continued so many Months, I think I might say Years, afterwards, complaining of no Pain, lying weak and feeble only as a Bed-rid Person. Dr. *Douglafs* has observed a Case somewhat like; but in so young a Subject as the former, I must confess, I never observed such Consequence. HIST. 23.

We had here a fair Opportunity of trying the *Osteocolla*, which was also exhibited, as I was informed, in large quantity in the House, but which, as other conglutinating and corroborating Remedies tried before, was fruitless; the Flux he was at first seized with, having so entirely dissolved the Cement, and wasted so much of the nutritious Juice, that the Blood being rendered poor, and deprived of its Balsam, the Extremities of the Bony Fibres now also grown rigid, and those Particles unassimulable, *Nature* was unable to consolidate the same: So that an *Atrophy* of the Limb ensuing, the Surgeon had no other Trouble, than with his Knife to separate the useless Part from the rest of the Arm.

How far this singular Operation was justifiable I shall not question, who, for my own part, do not think it was Male-Practice, there being no Probability, after so long time and so many ineffectual Experiments, of a *Callus* ever intervening, and the Hand being rather burthensome under

under the present Circumstances, than any way serviceable.

The Historian, or rather, (for so I think I may venture to call him) the *Tell-Tale*, *Pliny*, has several fabulous Stories concerning a sort of *Sponge*, found near the Waters of the *Alps*, which, if we may believe him, will do still greater Wonders, in few Hours consolidating the Ends of a broken Bone; but, quitting this Digression.

When you have reduced the *Fracture*, and the next Day coming to view the Limb, if you find a small *Tumour*, both above and below your *Splints*, 'tis an Indication of your *Bandage* being rightly adapted; for if there appears none at all, 'tis an Argument the same was too slack; it being rare, even in the most simple *Fracture*, and the best Habit of Body, but that some little Tume-faction will necessarily arise, from the Contusion accompanying the Hurt: And, as *Hippocrates* delivers concerning Wounds, we may surely say the same, viz. *Si magnis & pravis, existentibus tumores non apparent, malum*. Besides the Ligature, tho' but moderately streight, will, by intercepting the freedom of Circulation, contribute somewhat thereunto: However, this is easily discovered, by the Looseness of your Roller, which must then, (tho' a very improper Time) be undone and made up tighter, at least the *Splints* over it, for security of the broken Bones, are to be tied faster together with the Tapes, till you come to undo all at your second Dressing, which at such times must be sooner than otherwise occasion calls for.

On the other hand, when you find the said Tumour so large, either at the top or bottom, and the Folds of your Roller as it were buried therein, so that there appears danger of a *Gangrene* by the Stagnation, you must not only forth-

with

with loosen the Tapes of your Splints, particularly when they have promoted such Tumefaction by their tightness, but with your Scissars, strong enough for that purpose, cut through the Folds of your said Roller, especially at the top and bottom, where they are found to gird upon the Flesh: Afterwards embrocating *cum Ol. Rosar. vel Ung. Sambuc.* and fastening the former, but more gently, with your Pillow as before, visiting your Patient again at Night, or at farthest the next Morning; when if you find the Swelling somewhat relaxed, or not to encrease upon you, all may go well as yet; but if it happen to be enlarged with Vesications or Blisters round about, your Patient beginning to complain of a Numbness throughout the Limb, you must immediately let all fly, taking care however to secure as steady a Position of the Limb as possible, unto which you have now given such liberty, embrocating all about as before, but without disturbing or moving the same; and if there be *Vesications*, let them be snipped, dressing them up with your *Digestive*, and either rolling up again more easily, if the *Fracture* will allow so early raising up or moving the Limb, or contenting yourself with your *Cloth-Compresses*, and your *Splints* tied close for a few Days, till the Symptoms remit; or, which may be more convenient, changing your first *Bandage* for the *eighteen-tailed* one, (to be described presently) which at such times, where there is necessity for a frequent Inspection of the Member, is full out as necessary as for the *compound Fracture*, giving the least Disturbance to the broken Bones.

But when your Patient remains easy, and the Bandage such as neither streightens so much as to impede the Circulation, nor is yet so loose as to hazard

hazard the starting of the fractured Extremities, having daily a watchful Eye upon the Limb, and continuing your Embrocation above and below the Binding, the Tumour still so requiring, being also satisfied, that your Bones were at first rightly placed, or conjoined in the Reduction, you need not be in haste to open or take off the Plaister, till the *Callus*, beginning to form, will suffer more safely the raising up the Limb, at your second Dressing; which, however cautious or careful you may be, will give some Trouble or Disquiet thereunto; and therefore, upon these Regards, or under the present Circumstances, although the Patient may be perhaps importunate for the same, as fancying he may thereby be forwarded in his Cure, and otherwise neglected; yet when I have told him it was Rest only must effect it, and that, by the too sudden raising the Limb from its Support underneath, there might be danger of undoing our Work, I have protracted this second Opening at least for a Week or ten Days: Much longer I think it should not be delayed, lest some Bearing or Protuberance happening by the starting up of the Bone, and, the *Callus* beginning now to stiffen, it will be more difficult to rectify this, or any other Error committed since, or overseen at first: and indeed, if by any accident of Convulsion or Starting, especially in Sleep, which is customary through the disturbed Phantasy at such times, or by some Unruliness of your Patient when awake, you have any jealousy of such Misfortune fallen out, it will not be safe to defer this Opening so long; but after three or four Days, under these Conditions, it may be requisite for you to supervise your Work, diligently and carefully to remove your first Application, and, after strict Examination, to rectify what you find amiss, lest

nunc,

nunc, aut nunquam, should be the time of your so doing, or in the which you are to make a sound Man or a Cripple.

The *Apparatus*, for your second Dressing, is little differing from that at first, unless that there are fewer things now wanted; the same *Compress* and *Bolsters*, *Splints* also and *Tapes* serving again; nor have you always need of the *Posca* or *Oxy-cratum*, but the *Roller* which was then dipp'd therein, and thereby grown stubborn, or happening to be clip'd for relieving the Parts tumify'd, must be chang'd for a fresh one; and your *Defensive* for a *Cerate* of two Parts, *Diapalma* with one of the *Stictic*. *Paracels.* adding a little *ad Herniam*, with which having dress'd up as at the first Time, you are to defer your next Opening, as you see occasion, for a Week or ten Days longer, if not twelve; when your *Cerate* may be still warmer, especially in cold Weather, of equal Parts of the said Emplasters, or in cold Complexions and antient People, two parts of the *Stictic*. one *Diapalm.* and *ad Hern.* as aforesaid: In proportioning which, I would always advise, that you have regard to your Patient's Temper or Habit, either hot or cold, or dry and moist, as well as Seasons of the Year; otherwise, if you keep the same constant Method, you will meet with those whose Skin will not bear the least proportion of the *Gums*, without bringing forth a Heat or Pustules, attended with unsufferable Itching, and often times Excoriations, at which Times, or in which Constitutions, I have been forced either to continue the *Defensive* through the Course of the Cure, or mixing a very small Quantity of the *Paracelsus* Plaster therewith, as I found they could dispence with the same.

The

Time of
Confinement in
Fractures.

The Summer and Winter Seasons you will find also to require a various Application: In the very cold Weather, those Persons bearing that *Cerate* which they cannot suffer in the hot..

As to the Time of confining Persons to their Beds, under these Circumstances, there can be none precisely limited, so much depending on the Condition of the *Fracture*, the Season of the Year, the Age of the Patient, together with the Weakness or Strength and Vigour of Constitution, with some other Circumstances, as we observed in our Account of the *Prognostics* of these Accidents in general: So that five or six Weeks will be found as short a time, in some untoward Hurts of this Kind, and in some aged and diseased Patients, as three or four of the simple *Fractures* of the more youthful and robust, or strong; a *Callus* growing as firm at the Month's end in the latter, as at six Weeks, or perhaps two Months, in the former; therefore I always esteem'd it an Error, if it be one, on the right side, to keep my Patients in Bed, how well soever Matters might appear, a Week, at least some Days, beyond the Month, than to take them up so much short of that common Stage; and however some would complain of hard or unkind Usage on this Account, yet in a *Fracture* of both *Fossils* of the Leg, I scarce ever suffered them (tho' perhaps they have been allowed to sit up therein three or four Days sooner) to rise out of Bed, unless at five Weeks end; or, if the Thigh, at six the soonest; in some Cases I have prevail'd for their Confinement therein a Week longer, and I am satisfied they fared the better for so doing.

To ease their Backs upon occasion, and to give liberty to the Bed-Pan, I generally ordered a couple of strong Hooks to be drove into the Joices over-

over-head, whence a Cord or Rope being let down through the Tester over his Breast, and a Stick fastened across, with his Hands upon it, he has been able to raise his Body upon such occasions.

But farther, if any Accident, as *Pblegmon*, *Erysipelas*, *Gangrene* or *Sphacelus*, which are sometimes occasioned by the *Fracture* it self, at others by the Neglect or Ignorance of the Surgeon, not obviating them in time, should happen to fall out, you are to proceed as, in those Cases we have directed, in our Discourse of *Tumours*; placing the Leg in the same Cradle, and, for the readier coming with your Medicines at the Part, using also the like *Bandage* as for the *compound Fracture*, to be described next.

Accidents attending Fractures in general.

The *Oedenatous* Swellings accompanying these Casualties, at the first sitting up, or presently after upon setting the Foot to the ground, usually wear off after the wonted Exercise continued for some time: However, where there is a Redundancy of the pituitous Humours heaped up in the Blood, the *Callus* being fully confirmed, they are gently to be purged off with some of the *Pblegmagogues*, directed heretofore for *Oedema*, embrocating, or rather bathing, with the camphorated Spirit diluted with *Aq. Calcis*; keeping to a strict drying Diet, and, if there be found occasion, fitting the Limb with a *streight Stocking*.

Of Compound FRACTURES.

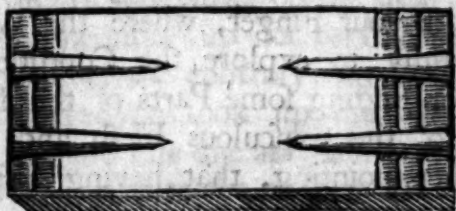
WE now come to the *compound Fracture*, in the vulgar Acceptation of the Word, in which the *Apparatus* is different from that of the *simple* one, inasmuch as that you have also a Wound to look after

Of the Compound Fracture.

after and provide for; in such manner too as may give the least Disturbance to the broken Bones.

Wherefore having a Dish ready, as before, that may hold all your Dressings, and examined the Condition of your Wound, as also that of your *Fracture*; first let your dry Dressings be prepared of soft Dossils and Pledgets of Lint, to lie next the Bone where it is like to remain uncovered, whilst others of both sorts are armed with your Digestive, *ex Terebinth. cum Vitel. Ov.* or the *Liniment of Arcaus*, no *Basilicon* being allowed near a bare Bone, on account of its Unctuousity or greasy Nature: also a Pledget thereof, large enough to cover the whole surface of the Wound, with a Panniken, in which some *Bals. Tereb.* and the aforesaid *Liniment* may be melted down together, wherein to dip your Dossils as there shall happen to be occasion: The next, your *Defensive* Plaister, as for the simple *Fracture*, large enough to comprehend the Limb, as formerly described, thro' which, where it lies opposite to the Wound, you are to cut a Hole big enough to come at the same, at the time of dressing, without removing the rest, or disturbing the *Fracture*: Then your Cloth-Bolsters also, as before. But now observe, that instead of your single or double-headed Roller, you are to take three Pieces of old Cloth, of like sort with that they were cut out of, all near of the same Size, the outermost being somewhat the longest, about half a Yard in depth, and three Quarters wide, more or less in proportion to that of the Limb, in which, as they lie exactly spread over each other, you make a Slit with your Scissors in two several Places, and at equal distance, on both sides opposite each to its correspondent, and so far towards the middle as to leave little more than a Hand's-breadth undivided, where the

the back part of the Leg is to rest: For your easier conception whereof, I have here delineated the Shape of one of them, which, from so many Ends remaining, viz. nine on each side of the three Cloths thus laid upon each other, is called by some, the *Eighteen Tail Bandage*.



The *Splints*, where there is room for them, with the *Tapes*, as before: The *Pillow* less and thinner, because in the room of the common Cradle, the same is to be put into a Case or Box, in which the Leg is placed, with the two Sides or Wings to be let down at pleasure by their Hinges, as does the Foot-board to keep off the Cloaths, and this for the easier coming at the Wounds, as to which still farther Improvement may be made to answer the several Exigencies, as the ingenious Artist may direct.

For a *compound Fracture*, with a large Wound on the *Gastrocnemius*, I once ordered a double-bottom Board for such a Box, of a piece of thin Wainscot, in which a Hole was cut so large, as that through the same I could apply my Dressing to the Wound, which Board was kept slung with Tapes, and, by means of a Pulley above, drawn up at the time of Dressing to such Height as was required, being after let down again into the Case, without the least Disturbance to the broken Bone, which it must otherwise, how carefully soever managed, have been subjected to: But, proceeding.

When you are thus furnished for the Work, and your Patient laid in his Bed, where, upon these Accidents, he is sometimes like to continue for several Months, you are, as before, to order your Extenders gently to begin their Work, for fear of exciting Convulsion or other dangerous Symptom, and, the Limb being on the Stretch, you are with your Finger, where the Wound admits, carefully to explore the Condition of the *Fracture*, or finding some Parts of the same protruded thro' the musculous Flesh and Skin, in such Manner pointing, that having fruitlessly attempted to return the same into its proper Place, with a small *Capital*, or the Watchmakers *Saw*, you must take off such Fragment thus lying in the way, replacing the rest.

Farther, if any Parts of the Bone are so shiver'd as to lie loose in, and pricking of the Flesh, you are to take them out with your Forceps, finding they will give way, and may be easily extracted; otherwise if the Smallness of the Wound be the occasion that you can neither introduce the Part protruded, nor draw forth those separated within, you are to dilate the Wound, in such manner as may facilitate either Operation.

And thus, when by the due Care of the Extenders, together with your own, you have replaced the *Fracture*, you are next and immediately to secure the Bones, which shall after happen to be exposed to the same, from the Air, by your dry Lint, filling the rest of the Wound with your Digestive, where the Flux of Blood is considerable; otherwise some *stiptic* Application, as the same shall require: Then encompassing the Limb with your *Defensative*, with the Perforation therein against the Wound, your *Bandage* before orderly placed underneath, upon the *Pillow*, let the

the Leg, where there was necessity for raising it up, be gently laid down: The Extension not yet entirely remitted, for security of the Bones in their places, whilst you are dressing up; and having fixed your *Bolsters* on each side, you are to bring one of the lower *Tails* overthwart, tucking it a little under, by way of fastening, on the side opposite; at the same time take up its correspondent, and, bringing it over the contrary way, fasten it in like manner where you took up the first; then proceed to the middle one and its opposite as with the former, and so to the uppermost: when, coming down again, take up the lowermost Lappit of the second Cloth, and having thus dispatched all three in that Rank, conclude with those that are undermost, or nearest to the *Pillow*, still observing, as you bring each of them across or over, that you stay, with the Fingers of your other Hand, that side of the Cloth you are pulling from, so that the undivided Part thereof may keep the same Situation underneath, or remain in the middle, straining each Fold, but with great caution, before you make the Tuck.

When you have finished your *Bandage*, your *Splints* are to be applied in such manner, that the Wound may be the least offended, either by their Sides or Extremes.

Lastly, the *Pillow* must be tied round with the Tape or Filleting, before also conveyed under it for such purpose, and the Wings or Sides of the Case, as well as the Foot-board are to be raised, that the enclosed Member may rest secure from the Coverings of the Bed: The chief Care being now to keep all still and quiet, with the *Fracture* unmolested, though perhaps you are daily obliged to inspect the Wound, which being digested, you must hasten *Incarnation*, where the *Periosteum*

is not too much torn, or that the Bone, by being long exposed, is not also tainted or corrupted.

But if you find an *Exfoliation* unavoidable, or that some part must of necessity come away, before you can cure the Wound, let your dry Dressings, as at first, be still continued to the same, as, after Digestion, to the Wound it self, for avoiding of a *Fungus*: Proceeding now, as we have already directed for the *carious Ulcer*, but with this Difference, that, before your *Callus* is formed, none of your strong *Desquamatories*, neither yet the *Cautery*, are to be applied, for fear of Injury thereto, or exciting some new Symptom, as *Fever*, *Inflammation*, *Spasm*, or the like: But I have already acquainted you, when speaking of the Wounds of the Head with a bare *Cranium*, it does not absolutely follow, as an unavoidable Consequence, that in others, happening after this way to be uncovered, there must ensue a *Desquamation*; since I have seen several, which after Reduction, being defended by the musculous Flesh, and artfully managed, to have united without *Scaling*, where the Wound has incarned and firmly cicatrized, with little more Trouble than if the Bone had received no Injury.

But where it falls out otherwise, or the Case is such as that by means of great Loss of Substance, *Abscess* or *Apostemation*, the Bone lying long exposed, is tainted thereby, you can't expect at such times so easily to accomplish the Work: At which dressing, as just now directed, you must wait 'till Nature, separating the corrupt from the sound Parts, throws them off, when the Wound with little difficulty will after, if nothing obstructs, admit of healing.

As

As for what regards the *Regimen*, in respect of the *Non-Nat.* but more particularly *Diet*, you are to be stricter than you were in the *simple Fracture*; or, as we directed for Persons dangerously wounded, so here likewise it must be *tenuis*, if not *tenuissima*, at least for some time; forbidding *Flesh, strong Drink, and Wine*, in order to prevent the Flux of Humours, to which, thro' the great Pain attending, these Hurts are very prone, and by which, *Fevers, Inflammations and Abscesses* are stirred up, one after another at some times, to the great Disturbance of the broken Bones, Disquiet to the Patient, and Vexation to the Surgeon; all which are likewise frequently owing to some small Fragments or Shivers of Bones, irritating the Fibres, which, as before remarked, at the time of Reduction, are carefully to be inspected and removed.

Of Fractures with Comminution.

Fractures with *Comminution* of the Bone, either with or without a Wound, when they are very great, and the Bones splinter'd, or together with the Flesh crushed to pieces, as by the Wheel of a loaded Waggon or Cart, the Fall of a Pipe of Wine, Hogthead of Sugar, or the like, slipping from the Pullies, or out of a Crane, as sometimes happens on the Keys by the *Waterside*, or Merchants Warehouses: These Cases are always of the most dangerous Consequence, and 'tis but seldom that there is any great Prospect of saving the Limb: Wherefore, it will behove you, whilst the Accident is fresh, or before the Patient is tired out with Pain, or thrown into Convulsion, to call in some of the antient Masters, or other judicious Persons, as the Rules of that

Fractures
with Com-
minution of
the Bone.

worshipful Company have appointed, with whom to consult; and perceiving a Necessity, as we told you, when speaking of Wounds where great Portions of the Muscles were contused, mortified, or torn in a manner quite away, to hasten *Amputation*, or cutting off the Limb: But if you have a good Habit of Body to do with, and the splintering not very great, nor the fleshy Parts too much contused or lacerated, if there be a Wound, you may probably thereby remove such Shivers as are most likely to create Trouble, lying in the way, as we have already observed; or, if not, finding any pointed ones under your Fingers, pricking against the Flesh or Skin, you may make one, to disengage them; afterwards as artfully as you can replacing the rest, and reducing them into as good Figure as the *Fracture* will allow, proceeding as we have advised for other *compound* ones: When it may fall out, even beyond your own and your Patient's Expectation, a *Callus*, intervening after sometime, cements the broken Parts; and however ill shapen the Leg may happen to be, as, do what you can (where Apostemations ensue one upon another requiring to be dilated, by which the fractured Bones are disturbed and rendered foul, or great Pieces thereof forced to be removed) you can't sometimes prevent: Yet will it for the most part, when assisted with Art, be better able to bear a Share in supporting the Body, than a *wooden* one.

HIST. 24.

Mr. *Sberman*, in a Case delivered to the R. S. seems to magnify his Success, in a *compound Fracture* of the Thigh of a young Man, of about seventeen; from whom he was obliged to take out the whole Substance of the *Os Femoris*, about two Inches: And yet, by keeping a due Extension, Nature did in four Months supply such a *Callus*, that

that the Limb was not a quarter of an Inch shorter than that on the other Side, the Person being as strong as ever, and walking without Lameness.

As to which, I make no question of Nature's supplying the Interstice; but the great difficulty is to maintain such a uniform Extension, that the Ends of the Bone may lye in a direct Line the one to the other, whilst the said *Callus* is forming, and becomes *ossify'd*: Which in some ungovernable Patients, or others accompanied with Convulsions both sleeping and waking, that frequently alter the Position, let the Artist take all possible Care, an unavoidable Lameness must oftentimes be the consequence of these *Fractures*.

Esaïas Meibnerius relates the Case of a broken *Fibula*, where, by some ill Surgery, the whole Bone was forced to be extracted, and Nature supplied a *Callus* in its place; so that he was able afterwards to walk without a Crutch. But here you are to consider also, there was a very good Support still left, I mean the *Tibia*, the principal of the two, which kept the Limb in its due Extension and Position, so that Nature was the better enabled to furnish such Assistance. Hist. 25.

A poor old Man, thrown down by a Horse, as he was crossing the Channel, had the Wheel of a loaded Waggon passed over his Leg, which in a manner shivered the Bones to pieces, several pointed Particles lying out of his Stocking. Hist. 26.

Being from Home at the time of this Accident, two others had been sent for, who, either doubtful how they were to be satisfied, or dismayed at the sad Object, withdrew and declined meddling. Upon my return, some reputable Persons came to me, to inform me of this Misfortune, and desire my Assistance: Upon which I took with me one of the young Surgeons who had been there

some Hours before, and, examining the Nature of the *Fracture*, gave instantly my Opinion, that the Case required immediate Amputation. Yet, considering his Age, above Sixty, I could give little Hopes of Success from the same; and was therefore, as in all such doubtful Cases I have been, willing that the Patient should rather desire it of us, at least give his hearty consent thereto, after his Case had been justly stated; but the old Gentleman earnestly begged, if there was no other Remedy, that we would let him die of his broken Leg, or the Symptoms likely to ensue quickly upon it, than to have so poor a Chance, as he termed it, we could warrant of his surviving the Dismembring. Upon which, I then proposed his being sent to one of the *Hospitals*; but that being scarce practicable before next Day, and the same Persons interceding that I would engage therein, believing also it would not be a Work of more than two or three Days; I order'd my Assistant to get ready the customary *Apparatus* above described; whilst with my Fingers, as the Leg lay upon a Pillow in his Bed, I took out of the Wound several loose Splinters; after which directing a gentle Extension, as the Limb still lay along, for on the least raising up it fell all to pieces, I placed the Remainder, with both my Hands, in as good a Posture as I could, but perceived yet a large pointed Portion of the *Tibia* thrusting out (which I believe was at first owing to a want of due Care in his Removal, from the Place he got his Hurt, to his Habitation), would not be depressed, I was therefore forced to saw it off before I could put the Member into any tolerable Figure.

Having done all I could in the Reduction, I dressed up the Wounds with warm *Liniment*, large Pledgets

Pledgets of Tow, first faced therewith, being dipped in some more of the melted Medicine, quickened with a small Portion of the *Ol. Tereb.* and over all a *Cataplasm* of *Tberiaca Lond.* then bringing over the *Tail Bandage*, and fastening the *Splints*, as the shatter'd Limb would allow, I raised the Wings of the Case, together with the Foot-board, which was, before we began, placed ready under the Pillow upon which the same was extended; and then gave Instructions to a Woman, provided to look after him, how to order other Matters relating to his Nourishment, and took my Leave in company with my Assistant, whom I had engaged should attend me so long as there was occasion.

The next Day we met, provided with warmer Applications, as the *Spir. Vin. Campb.* an *Elixir* *viat. Fotus*, *Tinct. Myrr. cum Ol. Tereb.* when coming to the Bed-side, I perceived the *Tenure* or *Rhythm* of his Pulse, to my Surprize, but little varying from that in a sound State, a free Breathing, little Fever, but a gentle *Diaphoresis*, neither Intermision in the Pulse, Twitch or Tremor on the Nerves or Tendons, nor yet the least appearance of *Delirium*, altho' he had slept little or nothing since we left him, which he said was owing to somewhat pricking him between whiles, and which, if he fell into a Slumber, made him start.

When lifting off the Cloaths to take a view of the Leg, I perceived both above and below the Bandage very considerably swelled, but with a kind agreeable Warmth upon the Foot and Toes, where I expected we should have found a *Gangrene*; and proceeding farther, taking off both outward as well as inward Applications, the Wounds, tho' crude, appeared with no discouraging Aspect: There was one pretty large, made seemingly by the

the Head of a great Nail in the Cart-Wheel, on one side of the *Tibia*, with several others on the opposite, occasioned either by the Bones themselves, the Leg lying on an Hollow, or by Compression against some rugged Stone in the Channel: all which having now again examined with my Fingers, to feel if I could discover any angular Parts, which by their *Stimuli* might have occasioned the *Spasm* complained of the Night past: But finding none of that kind, nor indeed any other, so entirely loose as to give countenance to their Removal, I again covered all any way exposed with my dry Dressings; laying on three or four Stuphs expressed from the Fomentation, whilst the other were preparing: After filling up the Remainder as at first, with suitable Dossils, first armed with *Liniment*, then dipped in a hot Mixture of three Parts the said *Liniment*, and one of *Tinctura Myrrhæ cum Tantillo Ol. Terebinth.* as I believed the Sense of the Part would admit; covering these with larger Pledgets of Tow, faced with and dipped therein, over all, the *Tberiaca*, spread Plaister-wise, and laid on hot: Lastly, the *Tail'd Bandage* and *Splints*, but gently fastened, to support the Limb.

The third Day the Foot appear'd more swell'd, with some *Vesications* about the Ankle, threatening a *Gangrene*, also a vast *Eckymosis* quite up to the Knee, with great Gleet from the Wounds: Wherefore snipping off the little Bladders, and adding still more of the *Tinctura Myrr.* as well as *Ol. Terebinth.* to the Digestive, dressing up in all respects as before; having first well fomented, with a larger Addition of the *Spir. Vini Campb.* and applying the *Tberiaca* on the outside scalding hot: His Pulse I found now somewhat intermitting, and his Head disturbed for want of Rest.

The

The fourth Day, I perceived large Portions, not only of the Skin but the Muscles also, to turn putrid, yet with some little appearance of Digestion round the edges; his Pulse rather mending, and his Head better settled.

Continuing the same Applications three or four Days longer, our Digestion much increased, the *Sloughs* beginning to separate, and casting off; the *Tibia*, in its undivided Part above, lay bare on the inside, the length of two Inches, which we dressed with Pledgets of Lint dipped in, and after express'd, from the Tincture aforesaid: For the better Digestion of the *Ulcers*, and correcting the Putrifaction, I strewed on the *Præcipit. Rub.* then cover'd them with Dossils wrung out of the melted Liniment and *Ol. Terebinth.*

Thus proceeding daily, for about a Fortnight, the threatening Symptoms of *Gangrene* and *Mortification* seemed to be overcome, and we had now so large a quantity of Matter discharged, as on the other hand was likely to exhaust our Patient's Strength, before we could have a sound Basis to heal upon: So that I could give little Encouragement as to the Event, or (as I often expressed my self to his Friends in his Hearing) other Prospect at best, than that of his being a miserable Cripple, in expectation of his listening to an *Amputation* in time, before he was too much wasted. But understanding the Danger of his Limb mortifying was now over, he would by no means hear of parting therewith; so that, to ease my self of the tiresome Work all I could, I now left him pretty much to the Care of my Assistant, visiting twice, and sometimes only once a Week: When after nine or ten several small Fragments of the Bones casting off, and working themselves out, the Discharge began to lessen, and the Patient, though

though much emaciated by his strict Confinement, (having never once been moved from the Place he was first put in his Bed) yet very hearty, and taking his Nourishment of good Broths, Meats of easy digestion, and a Draught of strong Beer he had been accustomed to, once a Day.

At three Months end, that Part of the *Tibia*, which had lain exposed, not moving, nor tending to a Separation, I directed my Assistant now and then to give it a light touch of the *Cautery*, to promote the Exiccation thereof, and consequently a *Desquamation*, at least of the outward *Cortex*, if not deeper tainted. From which, and the dry Dressings that were now every where applied, after sixteen Weeks, or four Months time, instead of scaling, a large Piece of the said Bone began to move; and, a Month after that, was so loose as to be taken out; the Leg from this time daily and visibly shortening, notwithstanding all Endeavours to maintain a good Position thereof. However, finding nothing more to come away, the *Callus* at length growing so firm as to bear (although with Caution) the stirring of the Limb, at half a Year's end, he was lifted out of Bed, in which he had sat up several Weeks before, and well content he had compounded for his Life under so severe an Accident, with an ill-shapen Leg, or one much shorter than the other, which by the Help of a Cork-Shoe, and a Crutch under his Arm, a Stick also in his other Hand, enabled him to walk about, living after to be eighty Years of Age; and, in about two Years from the Accident, laid aside his Crutch, walking only with his Cane, or rather under-hand crutch-head Stick, with less Trouble than must in all likelihood have attended the stump Leg.

Yet

Yet do I not think this Instance sufficient to stand a Precedent in the like Cases; for if here had not been, an excellently well constituted, or, as we sometimes pronounce it, an *athletic* Habit, it had been, in all appearance, impossible to have kept off a *Necrosis*, or absolute Extinction of the natural Heat: Or, missing this, yet, by *Abscesses* or *Apostems* ensuing one upon another, very frequently at these times, the Odds were exceeding great, that by so large and long continued a Discharge from thence, together with the Fatigue of Pain, he had not sunk under a *Marasmus*.

It was indeed a Work very laborious to us, as well as to him; but having began, tho' at first in expectation it would be very short, yet meeting after with so hearty an old Man to deal with, and having an Assistant to give constant attendance after the first Week, I was the rather encouraged to go on, and at leisure times to inspect the Work, 'till it was concluded.

Upon his first setting the Limb to the Ground, after sitting him with his Shoe, a pituitous Tumour, or *Oedema* fell down thereon, as well as on the Leg in general, incommoding him for several Weeks: But putting on a laced Stocking, and filling the Inequalities thereof with Bolsters of Cloth, that we might render the same more serviceable, and directing a proper *Regimen*, suited to that Tumour, he got the better thereof; and gathering (as we say) more Strength to stir about, in some few Months it was entirely dissipated.

To this Patient, after the Removal of the loose Bones, and the Digestion of the Wounds, for the farthering of *Callus*, I gave good store of the *Osteocolla*, with *Comfry-Roots*, boiled in his Broths: But whether

whether they, by supplying a proper *Gluten* to the Blood, as in Reason they might be supposed to do, or that the latter of itself, from its own proper Balsam, furnished the Cement, I say not absolutely, though inclining to the former Opinion, so well attested, as the same has been, by the most consummate Artist of the Age in which he lived.

There is one very great Difficulty attending these *Fractures*, and that is the shifting the Bandage without giving disturbance to the broken Bones; for altho' it is never so well contrived to be drawn away, yet it cannot be done, although with the utmost Heed and Caution, but with Hazard. And as at these times there are usually great *Gleet* for the first Days, and after Digestion, or in case of Apostemation, as large Discharge of Matter, there will be a Necessity once in three or four to change the same; at which times, having fresh Cloths indented as the first, spread out smooth on each other by you; whilst one supports the Heel, another gently grasping, with both his Hands, a little below the Knee before you dress up; having removed your *Splints* on the outside, and untucked the Tails of your foul Bandage, let one on each side the Leg, taking hold of the upper and lower Lappits of that lying next the same, raise leisurely so far that a fifth Person may, pressing down the Pillow with one Hand to facilitate the Work, with the other draw from under him the two lower, at the same instant clapping into their place the three Tails of the fresh Bandage thus evenly laid, whilst some other Person on the side opposite, pressing the Pillow as before, pulls them so far as to lodge the undivided Part in the midst: This done, the Leg is leisurely again rested, and whilst held steady on each side, together with the fresh Bandage likewise, especially

cially on that you are to draw from, the remaining foul Piece is, with the utmost Care and Caution to be taken away also from underneath, when you may dress up again as formerly.

I generally at these times, to save the Linnen all I could, and prevent the too frequently shifting, us'd Wads of Tow, so plac'd about the Dressings, as to imbibe some part of the *Gleet* and *Matter*, and to renew them daily for this purpose.

Accidents of this Nature are likewise common on board a Ship, where, by discharge of their Guns, loaded either singly or with Chain-Shot, in their Engagements, large Splinters whereof are sometimes forcibly impell'd into the Limbs, shivering and miserably tearing and confusing the fleshy Parts; at which times the want of Convenience, were it practicable to defer the Operation, puts them speedily, amidst the Hurry, upon dismembring; and happy too at sometimes for the Patient, who must otherwise perhaps undergo a longer continued Torture by the Motion of the Ship, and the want of those Necessaries to be had at other Times, and in other Places; or deferring it now, it may probably be enterpris'd after at a more unfit Season, and too late to save his Life.

A late Writer tells us of five Pounds allow'd by the Government, for every Limb cut off at Sea: But this, as I have remark'd elsewhere, is a vulgar Mistake, and too uncharitable a Notion to be taken up, I think, if it were so, that any has been dismember'd for the sake thereof.

Of Fractures of the JOINTS.

THE nearest of kin to these are the *Fractures* which befall the *Joints*, upon the Heads or Extremities of the Bones, and are abundantly worse than

than the common *Fracture*, or that in the *Interstitia* thereof, as we hinted in our general *Prognostics*, being liable to greater Fluxion, from the *tendinous, nervous* and *ligamentous* Substances therein affected, as also to a Stiffness and Immobility of the Juncture, by reason of the *Callus* falling in between, and forming a sort of *Anchylosis*, more especially where the Limb is kept upon a flexure, as that of the *Cubit*: The very Confinement also after these Misfortunes, or the keeping the same in a different Posture, *viz.* that of Extension, as on the Knee, will at sometimes stiffen the Joints by the *Mucilage* grown hard and dry, which is separated by the Glandules thereof, for their Lubrication and freer Motion; and that to so great a degree in the middle-aged, but more particularly in ancient People, notwithstanding all Endeavours to prevent this Inconvenience, by emollient *Embrocations*, that it is long time before a good use thereof is recover'd: How much more difficult then must we expect it, where together herewith the glutinous *Callus* has diffus'd it self, and as it were lock'd up the Joint?

In the Management of these there is no room for *Splints*, instead of which your *Bolster-Compresses* of Cloth, before-hand shap'd to the Parts, then dip'd in *Oxyc. cum Alb. Ov.* and express'd, are to be laid on each side over your *Defensive*, with one larger of the same kind that may comprehend the Joint, and the double-headed Roller, which at these times is preferable to the single: When raising the Member gently both above and below, the Extension is to be made as formerly observ'd; and having enquir'd into the Condition thereof, the Bones, with the Palms of both your Hands, are to be carefully replac'd; when your *Defensive* and Cloth-Compresses are to be laid on and adapted

adapted, the middle of the Roller being now brought under the Joint, with each of its Ends roll'd up tight; after which, bringing one of them to the right, and at the same time passing up a little higher to the left with the other, you proceed with one, and the other contraryways, with the several Circumvolutions till the whole is taken up, by which means you will more regularly compress the distorted and broken Bones, and prevent their starting out of their Places, than if the *Bandage* was still made the same way.

When you have after this manner reduc'd the *Fracture*, it will be necessary you should make a suitable *Prognostic* of the Event, I mean the Hazard there may be of a stiff Joint; to obviate which all you can, so soon as ever the *Callus* will allow the stirring of the Limb, having for several Days before lubricated the *Tendons*, and all round the Joint, *cum Ol. Lumbric. Ung. Dialth. Axungia Humana*, and the like, you may, whilst with one Hand underneath you gently stay the Joint, with the other as easily bend the Limb below; by which repeated Practice, if you gain never so little at a time, yet, by daily pursuing this Method, you will find you may get farther ground upon the Fluxion.

If the Elbow, you must in like manner gradually attempt the Extension, and the Rigidity, Stiffness or Immobility still continuing, the said *Callus*, as before taken notice, being thoroughly confirm'd, you may suffer him to lift or carry a Weight sometimes in the lame Hand, suitable to his strength, and such as the Case shall require: After which, still *embrocating* as before between whiles, particularly going to bed, let him accustom himself, when warm therein, to be often

bending and extending the Arm, as he can suffer without Pain.

These Methods failing, together with the Bullock's Paunch, into which the stiff Joint, where it can be done, is introduced for several Days, and continued whilst the Heat remains, the last Remedy is the *bituminous* Waters, such as those of *Bath*, where, besides the going into the same, the pumping them on the Part very frequently recovers these maim'd Limbs beyond most others: But here also you must beware you use them not too soon, lest the *Callus* not being perfect, instead of your expected Relief, you meet a farther Mischiefe, by loosening thereof, which I knew befell a Gentleman, I was after concern'd for, from his too early Resort unto that Place.

Of the Fracture Length-ways of the Bone.

Fractures
Length-
ways of
the Bone.

THE next we shall observe to you are those *Fractures*, which are made *secundum Ossium longitudinem*, and here you want not so great Extension, nor yet any other Compress than the two side *Bolsters* over your *Defensative*; also the double-headed Roller, after the manner we directed before, in those of the *Junctures*, which, I think, at these times also more serviceable than the single, as conjoining the two sides of the divided Bone, both to the right and left, more exactly together than if made only to one of them.

But this Accident I have formerly acquainted you does not often fall out, at least that I could fully persuade my self: I must own, that I have at sometimes suspected a *Fissure* lengthways of these Parts, where I have observ'd the Patient complaining thro' the Extent of the Limb, as it were

were in a streight Line, of grievous Pain, and from whence he has been, long time after the Accident, disabled from setting the same to the ground, or in the least to bear thereon: Upon which account I have confined him, dressing up us a *Fracture* with good *defensative Bandage* and *Splints*, as aforesaid: When after Recovery, and beginning to walk about, I once discover'd a manifest Fullness the whole length of the *Tibia*, with a rugged Inequality throughout, like that of Soder pour'd on a Crack in a Leaden-Pipe, which doubtless was the *Callus* intervening and filling up the Cleft.

FRACTURES of one Focil only.

IT frequently falls out, where there are two *Fractures*, Bones in the Limb, as below the *Cubit*, the *Radius* of one *Focil*, and *Ulna*; below the Knee, the *Tibia* and *Fibula*, called otherwise the greater and lesser *Focil*; that one of them may be fractur'd, the other remaining whole; which I have met with oftner in the Arm than Leg; as being more in Harm's way, by Blows and other Accidents, occasioning the same; although, by like Force or Violence, first impell'd against the Leg, we sometimes find the *Fibula*, or lesser *Focil*, broken; whilst the greater, or *Tibia*, stands its ground, and is able to support the Body in walking, though perhaps painfully and lamely many Paces after the Hurt receiv'd; which Bone I think can very seldom escape, upon a compleat *Fracture* of the *Tibia*, or if so falling out, could it be able to prop up the Weight above it.

At these times the *Apparatus* is much the same with that for other simple *Fractures*: But you have now this Advantage, that the one *Focil*, keeping its place, preserves in great measure the Recti-

Of Fractures of one Focil only. Sect. VII.

tude of the Member, so that there needs not that violent Extension, sometimes wanting in others, before they can be reduc'd to their proper Places; or, being replac'd, is there half the Danger of the Bone starting, its Partner proving so good a Stay, as where both are to be set to rights.

You may discover this *Fracture* below the *Cubit*, by a Rising on one side of the Arm or Wrist, and a Bowedness on the other, giving still farther way sometimes, with a small crashing Noise, upon a strict Pressure on the concave Part: When this happens on the side next the Thumb, it is the *Radius* that is fractured; if that on the side of the little Finger, the *Ulna*.

When the *Fibula*, or lesser *Focil* of the Leg, is broke, bearing hard above the outward Ankle, with your Fingers on the outside of the Leg, you will perceive the same also to give way; and, being got upon the fractur'd Part, the Patient makes a wry Face, if he does not cry out: The divided Parts of the Bones may be oftentimes, as in the other, heard also crackling one against the other, with a Hollow or Sinking in the middle from their Depression; besides, the Patient, if he goes to stand, complains of great Pain and Pricking in the Part.

Of Fractures *Incompleat*.

Semi-Fractures.

THERE is yet another *Fracture*, or rather, as I think it may not improperly be stiled, a *Semi-Fracture*: That is, when by some Force or Violence externally offer'd to one side, the same gives way by bending, but the bony Fibres on the opposite, being thus hard press'd, and not capable to hold longer upon the like Flexion, snap asunder,

der, after the manner of a Stick, not over dry, bent to such a Degree as to strain the ligneous Fibres, and put them, tho' whole on their Concave, upon flying asunder on their Convexity, and splitting perhaps half way through.

These Accidents usually attend Children and Infants, whose Bony *Striae* and *Lamina* are more ductile and pliable than the Adult.

I have frequently observed the same to ensue that barbarous Custom, of Nurses and Maid-Servants lifting those little ones by the Wrist, or taking them under the Arm, with the Weight of their Bodies bearing thereon, when going over a Channel; also a hasty snatching them thereby, as they are falling from their Laps, or other Places heedlessly set upon, by which their Backs are often wrench'd, their tender Joints distorted, and their Limbs thus render'd curved.

The same Injuries befall from their rudely tossing them to and from them, in their sporting with them; also raising them from the ground, with no other hold than that of their Hands round their Wrists or Arms: When, to add to their Imprudence and Folly, concealing the Hurt, the poor Infant is enfeebled all its Life, or the Limbs left crooked, especially if at Nurse in the Country, having had *Nature* only for a *Surgeon*.

In remedying these, being taken early or in time, after a suitable Extension, you are to bear the contrary way with your Fingers, or the flat of your Hand, compressing the rising Parts till you find the Limb strait as its Fellow; after laying on a *Plaster-Compress*, to prevent the Bones flying again, with the *Bandage* over the same, as we mention'd formerly in discoursing of other simple *Fractures*: By which you will soon retrieve the Injury, and set to rights these Accidents.

Of Fractures with Dislocation.

Of a Frac-
ture with
Dislocati-
on.

IT may be necessary, before I leave this Subject, that I should remind you of the *Fracture* which is complicate with a *Dislocation*: A Case certainly possible, tho' I dare say not half so common as knavishly represented, by some who call themselves *Surgeons*, yet are unworthy of the Name; but more especially by that most impudent and ignorant Set of knavish Pretenders, stiling themselves *Bone-Setters*, who to amuse the deceptile *Vulgus*, and enhance the Value of a sham Cure of this kind, give out that they set the Limb, which had been not only out of Joint, but broke perhaps besides, in two or three Places: Nor is it uncommon to meet with Patients, who have been thus abus'd, and seem willing themselves to give into the Delusion, reporting in all Companies where there was no body to call the Truth in Question, that their Arms or Legs have been thus broken, put also out of Joint, and presently recover'd by some of these famous People: Yet at the same time, if an Artist were to survey these Limbs, whatever there might have been of a *Dislocation*, (which is now past finding out) it were odds (so dextrously do these Folks perform their Work) if the least appearance of *Cal-lus* were discoverable, in any one of the fractur'd Places: But enough of this unlearn'd Crew in other Sections.

I know not more than once, that I have seen together both *Fracture* and *Dislocation*, in the same Limb, tho' possibly others oftener: Nor once the same Bone fractur'd at the same Instant in two distinct Parts thereof, in the proper Acceptation, and as commonly understood; Though I by no means

means dispute the Possibility also of this Accident.

In a *Fracture* with *Comminution*, a Bone may be said to be broke, not only in two or three, but in ten places, meaning, by the same, so many Pieces or Splinters: And in a very *oblique Fracture*, both of the Leg, as well as Thigh, upon the first View, and even handling of the Limb, I have been led into such a conception of the Case, perceiving the Bone loose in the lower Part, and several Inches above, discovering some other Part protuberating or pointing under the Skin: But on second and farther Examination, I have been convinc'd it was one and the same *Fracture*, and that the double Appearance, has proceeded only from the great *Obliquity* of the Bone broken.

I have said thus much, by no means to have it thought I disallow the Possibility, as I observ'd before, of the same Bone to be *dislocated* and *fractur'd*, or to be truly *fractur'd* in two distinct Parts; but to acquaint you, how frequently these Reports have been given out, when there has been no truth in the same; as I could make Oath it has been in most, if not all those I have examin'd after, where the Case has been represented on this wise. But, to our purpose.

In a *Fracture* happening with *Dislocation*, it certainly behoves us first of all to attempt the reducing the Bone displac'd, where the same is practicable, before we meddle with the *Fracture*: Otherwise the Extension requisite to replace the Head of the Bone slip'd out, must unavoidably undo your first Work of reducing the Bone broken.

I said if the same is practicable, because I think, in many Cases, it is not: To instance, admit the *Fracture* a little above the Wrist, the El-

bow or the Ankle, in the middle of these Bones, with a *Dislocation* of the *Cubit*, the *Humerus* or the Joint of the Knee; altho' here, I say, there may be greater prospect of Success, having more liberty for Extension as well below as above; yet supposing the *Fracture* on the upper part of the *Ulna*, the *Os Humeri*, the *Tibia*, and especially the *Femur*, near its Entrance into the *Pixis* of the *Ischium*, called *Acetabulum Coxendicis*, with a Luxation of the same, I see not any likelihood of succeeding in the Reduction of these Dislocations: And therefore all the Artist has to do at such times, is to take care of the broken Bones, and, making an honest *Presagium*, leave the rest to Time and Nature; lest, by seeming to over-act his part, *Inflammation*, *Gangrene*, at the best *Apo-stemation* and *Fistula* ensue, much worse for the poor Patient, than if you left him whole, with a less useful or imperfect Motion of his Limb.

We have already acquainted you what is to be done at other times, when any of these Symptoms happen to arise after the Reduction of *Fractures* in general: And if it so falls out, that they have already seiz'd on the Limb, before you are sent for, as in Places remote from present Assistance, or where the Accident has been overlook'd, and taken only for a Sprain or Contusion, the prime Scope you are now to aim at, is to take off these before you meddle with the broken Bones; for here also by an ill-tim'd Extension, in order to reduce the *Fracture*, you will heighten the same to the greatest Danger, not only of the Patient's Limb, but Life also.

Of the CALLUS over-grown, also of a crooked Limb left after a Fracture.

THERE are yet two supervening Accidents *Of the Cal-*
unobserv'd, at sometimes occuring upon these *lus too lux-*
Cures: The one an equal but over-grown *Callus* *uriant.*
round about the fractur'd Parts, occasioning a
Deformity by standing out above the surface of
the adjoining; the other, the same *Callus* agglu-
tinating the broken Extremities in a Curve, or
leaving a crooked Member; which has, as in
the Cases above recited, been owing either to the
Fracture never well reduc'd, or, after Reduction,
again displac'd by the Irregularity of the Pati-
ent, or from Convulsion in his Sleep, usual the
first Days, and from whence the Bone is afresh
someway distorted: Or lastly, as frequently also
falls out, to the untoward *Obliquity* of the *Fra-*
cture it self, or *Comminution* on the Bones; which
notwithstanding the greatest Care and Diligence,
especially when complicate with *Wounds*, *Abscess*
or *Apostemation*, could not, by any Art or Means,
have been left in a better Figure: But such is
the hard Fate of *Surgery*, that a *Fracture*, how-
ever ill-favour'd or compounded, is still no more
than a *Fracture*; and every one expects to come
off a like, with a strong and a strait Limb, or
else the Surgeon has not done his Duty; little
considering that he, who has broken his Limb un-
towardly, must expect a Cure of like kind: Or,
as I us'd to tell these thoughtless People, he, who
at all times wants his Limb to be well set, should
be sure of taking care that it be well broken: But,
pardoning the short Deviation.

As to the first of these Accidents, the luxu-
riant *Callus*, our Authors have propounded sundry
Medicaments

Medicaments to mollify, relax, and dissolve the same, grown superfluous; such as the Decoctions *ex Rad. Alth. Bryon. Lil. Fol. Malv. Branc. Urfur. Sem. Lini, ac Fœmigr.* &c. us'd as a *Fomentation*; *Embrocations* afterwards of some of the *Adipes vel Axungia*, as the *Adeps Anseris, Axung. Humana*, and the like; also to the same Intention serves the Fume of Vinegar sprinkl'd on the *Pyrites*, ascending all round the same, as we observ'd formerly for the *Schirrus*; the same *Emplasters* too there mention'd, such as the *de Ranis cum Merc. de Mucilag. de Cicuta ex Ammoniac. Diagalban.* The simple *de Minio* has had much *Eulogy* given it upon this occasion, how deservedly I cannot say, having never found any great matters perform'd thereby.

As the Disorder therefore seems easier obviated than remov'd, so, when absolutely confirm'd, I much question whether these Experiments can be at all securely enterpris'd: For, if the *Callus* has been of long standing, you may, I think, as well pretend to dissolve the Bone it self, as that now ossify'd *Callus*; and, if recent or imperfect, you run a Risk of separating the same entirely, although you may propose to set Bounds and leave off in time; for the Cement loosening atop, the concreted Juices underneath will likewise give way; so that although you think you have remov'd the Cause, by leaving off such resolute *Topics*, yet will not the Effect presently cease: Which, I well remember was the Consequence some Years ago of our *Bath-Waters*, recommended to

HIST. 27. a Gentleman under discontent upon such an Accident, together with the sulphurous Must stagnating at the bottom, laid round the protuberating *Callus*; nor yet it should seem compleat or thoroughly harden'd, in order to level the same;

same; which, though the Patient apprehended he had timely disus'd, yet, quickly after this return to Town, found himself mistaken; the whole growing so limber, that he was glad to lie in Bed as long again as he had done at first, and afterwards compound for a crooked Limb, instead of a knotty one.

So that, all things duly consider'd, I would never advise any Patient to set upon dissolving the *inform Callus* of a broken Bone, or to attempt other Remedy at these times, or on the like Emergencies, than a suitable Abstinence, using Foods less nourishing to supply the same, and farther to call off the superfluous Humour by Bleeding and gentle Purgation, repeated, if there shall be found occasion, still farther to diminish it; lastly, by suitable *Compress* and proper *Bandage*, to suppress or keep under, if not reduce it to proper Boundaries: And where these are timely practis'd, 'tis rare, I think, to meet with Complaints of this nature.

The other, *viz.* the *crooked Limb* left after a *Fracture*, is very common, and admit the *Callus* has been a Month, but especially of a longer Date, I see as little likelihood of Remedy as for the other. *Of a crooked Limb after a Fracture.*

The breaking asunder forcibly the new Cement at these times, has, I think, but rarely answer'd: Nor are you sure, after this second Rupture, of Success.

From the larger Bones, as of the Leg, but particularly of the Thigh, thus serv'd to gratify some more nice than prudent People, I have known *Abscesses* arise, and the *Fracture*, before *simple*, now made *compound*, by a new Afflux of Humours; at length *Rigours* and *Convulsions* have ensu'd and carry'd off the Patient; whose Life has been, I say,

say, thus forfeited to a vain Curiosity, and by an Artift full out, I think I may say also, as imprudent, for enterprizing the same.

Others, though with less of hazard to their Lives, I have known fare little better as to the Straitness of their Limbs; and some, after the Pain they have hereby undergone, have been left worse than before: Wherefore, at these times also, I should rather persuade the Patient to rest content with his crooked Arm, but especially his Leg and Thigh, however ill shapen, than to submit to a Breach of a *Callus* now confirm'd, in expectation of a strait one afterwards of either sort.

If I found a Bone protuberate upon an Accident of this kind, at the first opening of the Limb, before the said *Callus* was to any degree settled, I should not scruple probably, If I could not otherwise sink the starting ends by Compress, to renew my Extension, and endeavour remedying of the same, provided there was no *Tumour*, *Inflammation*, or other Symptom to contraindicate: And it may be at the second Opening, at the Fortnight's end, if I found the *Callus* soft or pliable, I might attempt the same; nay, at three Weeks, I would venture to rectify a very bungling Piece of Work, a started Bone, or a *Fraeture* ill reduc'd in a small Limb, as the Arm, either above the Wrist or Elbow; the Patient an Infant or Child, void at the same time of Fever or other considerable Indisposition: Farther than this I should be unwilling to go, nor yet so far with many *Fraetures*, and many Constitutions.

From all which, the young Surgeon may animadvert, that the best and safest Method, to avoid these Inconveniencies, is to have always a vigilant Eye

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Eye or early Oversight, where these Accidents are to be fear'd, when the Error may be corrected at sometimes; or if found, by long Delay, past help, to endeavour, by *Compress* well adapted, and strict Deligation, as the Part will suffer, to prevent the farther bearing out of the one, and the other with a quilted Stocking, to conceal some at least of the Deformity; Which is now the utmost, that with that Safety, I think, can be by the Surgeon experimented, or by the Patient is to be expected.



S E C T. VIII.

*Of Particular Fractures: And first
of those of the Cranium, or Skull.*



WE have already, in the foregoing *Section*, given you a brief Description of most, I think, if not all, the material Points relating to *Fractures in general*, with their *diagnostic* and *prognostic* Signs, as also their *Apparatus* and Method of Cure: But the *Fractures* of some particular Bones requiring a distinct Observation, and which were unobserv'd therein, we have farther thought fit to allot a separate *Section*, however short of some of the rest, for that purpose; and shall begin with those of the *Cranium*, or *Skull*, commonly treated of among the Wounds of the Head, with which they are often complicate, at least require generally to be so made, in order to their Cure: Not to mention those of the
Membranes

Membranes underneath, and of the Brain it self, owing frequently to a Depression of the said Bone beaten in, and wounding of those noble Parts: However, as we have before taken a liberty to deviate from some others, in our Method of handling these Subjects; so here also, intending a short Summary of *Fractures* under the same View, we place those of this Bone among the rest, passing by the Wounds of its outward Teguments, before observ'd among the particular Wounds, and touching only upon those underneath, no farther than concerns the *fractur'd* Skull.

*The several
Kinds of
Fractures
of the Skull.*

Of these *Fractures*, the most usual are the *Depression*, call'd, by the *Greeks*, *Ecpiesma*, and the *Fissura*, or Crack, besides which the vaulted or arch'd, by the same Writers; nam'd *Camarosis*, is at sometimes met withal: That is, when one Part of the Bone is beat in, the other lying high above it, or one being sunk, the other, like an Arch, is left standing on high at the top, which kind may, among other occasions, be owing also to some Instrument forcibly struck into the *Cranium*, when being hastily, and with the like Force, drawn out again, that Part of the Bone, into which it enter'd, is pull'd up above the rest by the Extraction.

The *Depression*, happening without a *Fracture*, is more peculiar to Infants and other tender Subjects, the bony *Lamellæ* of whose Skulls, may give way to the external Violence offer'd at sometimes, and, by their native Elasticity, perhaps rise to their former Site, at least remain impress'd, without any ill Symptoms, of which Dents and Impressions, call'd by him *Effractura*, you may read *Carpus*, in *aureo suo libello de Fracturis Cranii*, where in several Instances are given, which were recover'd without the Instrument: But these, I think,

may

may more properly be term'd *Contusions*, as the *Sedes* and *Excision*, formerly remark'd, *Wounds* of the *Cranium*; the first being made by a sharp pointed Instrument entering thereinto, the last by as sharp an edge dividing, and sometimes cutting away a certain Portion thereof.

To the *Fissure*, just above recited, belongs the *Contra-Fissure*, call'd otherwise *Resonitus*, which indeed, as to the reality of the Fact, is with me a little disputable. The Contra Fissure disputable.

For although upon the striking on one side of a *Glass-Sphere*, or other hollow globular Body, the Collision of the Air is such, that passing the same Instant round, and finding none, it bursts and vents itself on the parts opposite: But where the Globe is divided into several *Sections*, however close they are held together, yet will the Force break through at the first of these, upon striking either: Now the same Office that these *Sections* perform, in warding off the Blow, affecting Parts at greater distance, especially such as are opposite, or stopping its farther Progress, is done by the *Indentures*, call'd, by *Anatomists*, the *Sutures* in a human Skull; and where these are not obliterated, or perfectly ossify'd, I see not how this Accident can fall out, unless, as I hinted but now, in thole whose *Craniums* are compos'd of one entire Bone, where there never were such *Indentures* to be discover'd, and which, though I have seen two such, I believe are not often met with.

Celius, as also *Celsus*, take notice that in the hot Countries, particularly among the *Blacks*, it is more common to find the *Cranium* without any *Indentures*, than in other Places. *Vesalius* observes, that in antient Bodies he had seen them oftentimes obliterated. *Fallopianus* and *Lusitanicus* make mention also, of several they had found thus form'd

form'd. *Reinerus*, that *Albert, Marquis of Brandenburg*, born in the Year 1414, had no Sutures to be found in his Skull, which, saith he, is now kept as a Curiosity at *Heilbron*.

Yet allowing the Facts to be more common, may it not here be question'd, whether the *Impetus* of the Air inclos'd would not, in its Circumgyration, be so moderated, by the Perforation at the Base of the *Occiput*, as to hinder its bursting at the part opposite to the Stroke or Blow.

But I shall not enter farther into this Controversy, about which I find our Writers are not fully agreed, many asserting, and others, more especially among the Moderns, denying the Fact.

There is another of these *Contra-Fissures*, which some of them have taken notice of, *i. e.* when the upper part or *Table* is struck, and the Breach is made in the inward or lower one; to obviate which we have here also the *Diploe*, or medullary Interstice between the said *Tables*, which doubtless must break and dissipate the Force of the Air, alike with the *Indentures* before observ'd.

The outward *Table* I have seen depress'd, when the inner has escap'd and continu'd whole: But I cannot say, I have ever discover'd the inward *fractur'd* or beat in, the outer at the same time whole; though I shall not take upon me absolutely to deny the Possibility of these Accidents at some times, and in some Skulls, having several Authorities to countenance the same, particularly those of *Celsus*, *Valeriola*, *Nich. Florent.* as also *Fallopious*, who acquaints us, that after Death he had open'd several Heads, where immediately, under the part the Blow was given, he could discover nothing, yet on that opposite, great quantity of Matter was collected: But this might be the effect of Concussion simply, or Extravasation from

from the Vessels, by the force of the same, without that *Αποχέιμα*, or *Resonitus* in the Bone itself.

Lusitanus and *Parey* have observ'd the *Contra-Fissure*, but it has been where the Indentures have been *ossify'd*, and obliterated: The last acquaints us farther, that he had found the inner Table fractur'd; some shivers pricking the Membrane, whilst the outer remain'd entire; as did also *Fallopian*, who lays down this Reason, *Ratio autem est quia pars exterior patitur contusionem, quae communicatur inferiori laminae quae durior est; Et ideo superficies interna ejus vitrea dicitur, quare externa in eodem ictu potest cedere in se ipsam: Et inferior cum non possit, contrahit Rimam.* Upon which Account directing himself to the young Artift, he concludes thus, *Quando ergo magnum sese vobis offert vulnus (Et symptomata certe indicantia) abradite usque ad* Hist. 28; *inferiorem laminam.* Which he founds upon an accidental Proceeding of his own; for being call'd to a Patient wounded on the back part of his Head, with a large Sword, the *Cranium* being laid bare, he discover'd neither Cleft nor Contusion on the outer Table: When, for what reason, says he, I could not tell, it came into my Mind to rasp through to the *Meditullium*, where I discover'd a large Fissure, and hereby secur'd my Patient, who had been lost otherwise.

A Case of like Nature was shew'd in the Hospital *de Spiritu Sancto*, by *Cortesi*, where a Rupture was found on the inner Table, whilst that above was sound: But we shall now hasten to the Signs of a *Fractur'd Cranium*, among which, first,

The *Diagnostics*, and these are either *conjectural* from the consequent Symptoms, or *real* and perceptible both before and after opening of the hairy Scalp.

Diagnostic
Signs of a
Fractur'd
Cranium.

Of the first sort are *Stupidity and Coma*, upon the *Fall or Blow*, or a *Delirium* presently after, *Hæmorrhage or Bleeding at the Ears or Eyes*, as well as *Nose and Mouth*, *Vomiting*, *Convulsions*, *Faltering in the Speech*, and *Palsy of the Limbs*: I call'd these, with some others of the like kind, *conjectural Signs*, because it is very possible the same Symptoms may happen to supervene upon *Concussion* only of the Brain, with Effusion of Blood upon its Substance, yet without a *Fracture*: Nor is any so truly *Pathognomonic* as *Physicians* term it, or inseparable, as that whenever they appear, we can truly say the *Cranium* is *fractur'd*, altho' the *Vomiting* and *Sopor* give us more especially great suspicion.

When there happens a Wound, we are told also, that the Hair, if falling out where it grows, will be found cut in sunder, and standing as it were erect therein, which they will not allow can be otherwise occasion'd, than by resistance from the Bone underneath; but this, I think, is no more absolutely to be depended on, than some of the foregoing, or the Experiment of a String held fast between the Teeth, and being extended at the other extreme, jerk'd suddenly backwards and forwards, which may indeed very much affect the Temples, but will less influence other parts of the *Cranium*, although fissur'd or *fractur'd*.

In the case of *Delirium*, *Stupidity*, *Aphonia* or loss of Speech, or other Defect of Understanding, I have been at sometimes directed, in uncertain Accidents of this Nature, to the *fractur'd* Part, by the Patient's lifting up his Hand, as it were naturally very frequently thereunto: But this, where there is no profound *Sopor*, is sometimes wanting, and at others may prove erroneous.

The

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The *real Signs*, and such as give us indisputable evidence are, if there is no Wound, when, by pressing on of the Fingers round about the hairy Scalp, we find such Depression or Dent and sinking therein, as lets them in below the Surface of other parts of the *Cranium*; and when, by such Enquiry, the Bones being separated, we plainly perceive them to give way, with a Crackling under our said Fingers, the Case is then indubitable: Also, where there is a Wound, still farther evident, and perceptible by your Fingers making the enquiry, if it be not visible to the naked Eye.

The *Fissure* indeed is not so easy to be discover'd, the *Cranium* now keeping its proper Dimensions, and the same sometimes running very intricate and winding, at a distance from the part first receiving the Blow or Fall; at other times also so very small, as scarce obvious to the naked Eye, when the *Cranium* for that purpose is denuded of its Covering, the *Pericranium*.

That sort which is call'd *Rima*, the Cleft or Chink, is much easier found out, as more conspicuous and discernable when laid in view, as also to the Finger or Probe in searching after it; but here you must take care you are not deceiv'd by the *Sutures*, in taking these for some Cleft or Fissure, in such your Examination: As I remember happen'd to myself, in a *Leather-Seller's Child*, Hist. 3d; in *Old Bedlam*, who had received a Wound on the lower Part of his Forehead, complicate with the usual Symptoms of *Vomiting*, *Delirium*; as in *Fractures* of the *Cranium*; searching narrowly for which, I discovered a Ruggedness on the *Os Frontis*, which stop'd my *Probe*, and which I took at first for a *Fissure*; but in dilating the Wound, in order to make way for the *Trepan*, I found that

what I had before taken for such *Fissure*, was a continuation only of the *Sutura Sagittalis*, in this young Subject, quite down to the Nose. Of this varying of *Sutures*, *Galen* makes mention, as also do *Vesalius Rhodius*, *Sylvius*, *Bartoline*, *Riolanus*, and divers others, some of them finding this *sagittal Suture* wanting as others the *Lambdoides*. Yet if the Symptoms had not gone off as they did, by thus breathing the Part affected, I had notwithstanding proceeded to the Operation on the side of the said *Suture*, for the relief of the Brain; which, however, neither complicate with *Fracture* or *Fissure*, is yet oftentimes oppress'd in its Membrane by *Inflammation* and *Tention*, as well as *Extravasation* and *Abscess*, ensuing at sometimes by reason of the *Concussion*, and which on these Accounts requires the use of the Instrument, as much as if the *Cranium* above had suffer'd a Solution of its Continuity.

The Method of discovering the less perceptible, or *capillary Fissure*, is, according to some Practitioners, by going over the suspected Part with a Sponge dip'd in Ink, and afterwards wiping it off with another dry one, where the Defect is, the Ink soaking in, leaves a Trace behind, discovering its Site and various Windings.

Borellus tells you, that if, having shav'd the Hair, (which at these times is the first thing to be done) you lay a *Cataplasim* of *Bean-Flower* over the whole *Scalp*, and when the same is dry remove it, you will find the *Fracture* thereon delineated: But this, I think, whatever Discovery it may make in the larger, where there is no occasion for the Experiment, I doubt, will be found a very uncertain Rule to go by, in the *capillary Fissure*, where there can be no Damp or *Halitus* passing through, or other Vacuity sufficient to alter

alter or impress the contiguous Parts, or inward surface of the Application: And so far of the *Signs diagnostic.*

As to the *Prognostic*, it is certain every fractur'd Skull has more or less Danger attending, not so much from the *Fracture* singly consider'd, as the supervening Accidents, by reason of the Membranes underneath oppress'd, Effusion of Blood upon the Brain, or this last itself, together affected.

*Prognostics
of a Fractur'd Cranium.*

However, as a *Fracture*, where large portions of the *Cranium* are broken off, there is still more danger from so noble a Part as lies therein expos'd thereby, the which we cannot always say of the *Fissure*: The *Rhima*, or large one, call'd otherwise a *Chink*, is not only sooner discover'd, but at sometimes may so fall out, as to serve for relief of the Parts within, by discharging the Blood or Serum extravas'd, and letting out the putrid Streams shut in by the minute or capillary *Fissure*, which, escaping the Enquiry, is frequently overlook'd, till the Patient being thrown into Convulsion and Palsy, or the Brain corrupted, the Operation is perform'd too late: A fatal Instance of which I shall here transcribe, as given in the Introduction to a remarkable Case in Surgery, printed some Years past.

Being sent for to give my Judgment upon a Child, who, the Parents told me, had been bitten by a Mastiff, when I came to examine his Head, which was the part affected, I found the Scalp had been torn a considerable way over one side; the Hurt, as I remember, had been received six or seven Weeks before; and the lacerated Part, being laid down again, was in some places agglutinated, in others, where there had been loss of Substance, incarn'd and firmly cicatriz'd; so that what I had to overlook was a large and

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no unseemly Scar, under which at that time, I could find nothing amiss from the Child's Complaint, by the strictest Search: Yet soon after the healing of the Wound, he was seiz'd with a kind of *Hemiplegia*, his Eye and Lip somewhat distorted, and his Arm grew feeble, with the Leg, on the same side, drawing after him, accompany'd with a partial Loss of his Understanding, at length faltering in his Speech, and slaving like a Changling.

I enquir'd who had been their Surgeon, and they told me one in the Neighbourhood; being desirous of some Discourse with him, they sent, and the Man came, of whom I now enquir'd what he had observ'd at his first dressing, upon the *Cranium*, before he stich'd the *Scalp* to its disunited Parts? In his broken English (being a *Frenchman*) he told me the Skin, meaning the *Pericrane*, was untouch'd, unless where the Cur had set his Teeth, or else his Paws, he was uncertain which; but that, he was very careful in examining the same, and had no Reason to suspect the Skull was injur'd. Upon which, having told the Parents, that taking this for a true Report, I should impute the Symptoms to a Taint imprest by the Saliva of the Dog, now got into the Blood, and thence affecting the System of the Nerves; (a case somewhat like, I had formerly observ'd, which, by my Friend Dr. *Tyson*, was publish'd in the *Transactions* of the R. S.) but if on the other hand, this Man's Judgment could not be depended on, I was then of Opinion, that both the *Scalp* and *Cranium* ought to be open'd; upon which *Monsieur*, in great Passion, swore, that the Child's Skull was no more hurt, than the back of his Hand.

I then

I then prescrib'd some *anti-epileptic* Medicines, ordering a Blister to the Neck; and, for the greater relief of the Brain, directed the same Person to apply a *Caustic* on the top of the Head, at the meeting of the *coronal* and *sagittal* Suture; also a nervous *Embrocation*, *ex Ol. Lumbr. Petrol. de Castor.* for the Spine: After which I visited only a few Days, till the *Eschar* separated, and the *Ulcer* was kept open as a *Fontanel* with a *Pea*.

But, not meeting then with the Civility I expected, nor the Patient much the better for what I had directed, I withdrew, and made way for a Physician of good Reputation; when meeting with the Apothecary, and enquiring about the Child, was inform'd that the Symptoms were increas'd, the *Regimen* being little differing from the former.

Going sometime after upon Business by the Door, I had a Messenger sent after me, to desire I would walk in, and see the Patient once more, whom I perceiv'd indeed a pitious Object: The Mother told me he had been view'd by some eminent Practitioners, and that one of them had propos'd a couple of Issues between the Shoulders. I was then inclining to the cold *Immersion*, as believing still, if the *Cranium* had received no Injury, of which we had no outward Appearance, the lost Tone of the muscular Fibres might be thereby restored, and the Spring of the nervous *Fibrillæ* also thereby invigorated: Besides, in the venomous Bites of the Dog, our Authors recommend the *Hydrolysis* beyond all other Remedies.

However, this Experiment was luckily omitted, and what after indicated the setting on of the *Trepan*, I am not certain, but suppose, that Matter, issuing at length from underneath, might raise

a Tumour, or, the Bone growing loose, probably give way, and discover somewhat hitherto unobserv'd; be this as it will: The next News I heard was, that the Skull was perforated, by one of the Surgeons, who had seen him before, in the Presence also of the Physician, where a *Fissure* was discovered, an *Abscess* underneath, the Membranes rotten, and the Brain putrid in some Parts; the Child expiring two or three days after the Operation.

This, Gentlemen, is the Case truly stated, for which I was censur'd by a Brother, who had some Weeks before discover'd nothing himself, nor ordered any thing more than a couple of *Fontanels inter Scapulas*. The sorrowful Parent, notwithstanding this Reflection, was so sensible of my Care, and that the *Frenchman* only had been remiss in his Enquiry, before the Wound was sew'd up and agglutinated, that, in short time after, I receiv'd her Thanks for the Visits I had made her, with this account of her Child's Death; which I have hinted by no means in the way of re-criminating, but to make you sensible, how much it behoves you at all times and places, to be very tender of each others Reputation. But, hastening now to the remaining *Diagnostics*.

In small and superficial *Depressions*, especially of young Children, there is less danger than where they are deeper, and by the Angles of which the *Dura Mater* underneath is prick'd or torn, exciting Convulsions and other formidable Accidents: The former sometimes rising up again of their own accord, by the elastic Property of the bony Fibres themselves, or continuing where they are, exciting no threatening Symptom: Whereas the last, are seldom so lucky, but for the most part, if not always, require the Operation of *Trepanning*. Farther.

Farthermore, those *Fractures* seated upon or near the *Sutures*, under the *temporal Muscles*, and on the fore-part of the Head, have frequently more danger, than at a distance, or remote from the same, as on the sides of the *Synicput*, or more backwards on the *Occiput*: This I say, consider'd simply as *Fractures*, nor can there be any time precisely fix'd wherein we can pronounce the Patient absolutely out of Danger after these Accidents. Some of the antient Writers tell us of *one hundred Days*, I must confess I lost a very hopeful Patient, who was got up to *eighty eight*, and had been to appearance, after the Operation of *Trepanning*, the greatest part of that time, as well as ever in his Life: Whose Case, being extraordinary, I publish'd many Years ago, with a *Plan in Sculpture* of the *Fracture*: (and, at the Request of my Bookseller, have consented the same, for your farther Ease, should be here reprinted at the close of this Discourse of the *fractur'd Cranium*). So that, in this respect, as we said of *Wounds*, we may say also here, that some die presently of seemingly inconsiderable Hurts: A Box of the Ear having immediately depriv'd them of their Lives, others hold out long, and sink at last, whilst others again survive very desperate Accidents, and deplorable *Fractures*, and (though it be long) do well at last.

I have been sent for to a Person, who the next Hist. 32. Day died in earnest, from the tripping up his Heels the Day before by his Friend in jest, as they were sliding; by which a Rupture of the Blood-vessels happening, together with a *Fissure* of the *Cranium*, the Brain was instantly delug'd, as we discover'd upon *Dissection*, and the use of the *Saw*.

Sculptures

- HIST. 33. *Scultetus* takes notice of one, complaining of great Pain of the Head, with *Vertiga*, a *Paralyfis* seizing also upon the Arm, which gave the first suspicion of a *Fissure*; for which having open'd the *Scalp*, and made discovery of the Cleft, he trepan'd twenty Weeks after the Hurt receiv'd, when the Symptoms going off, the Patient recover'd.
- HIST. 34. *Hildanus* assures us, that he had seen a Maid, who had lost a great Portion of her Brain, performing at the same time her domestic Affairs, as if no Accident had befalln her: Yet after six Months she died, rather, as he relates, by the Neglect of her Wound, than its danger otherwise.
- HIST. 35. *Marcellus Donatus*, at the Year's end, took out a large piece of the Skull, which he found loose upon the Membranes; *Nature* having separated it of her self after the Accident, and an Angle of the Bone, thrusting up against the *Scalp*, gave the first Suspicion; which, finding otherwise impossible to be extracted, he first dilated the Wound, saw'd off a piece of the *Cranium*, which shut it in, and drew forth the loose Bone, the Patient afterwards recovering.
- HIST. 36. *Monsieur Vaughion* informs us, that they had at the *Hotel Dieu*, at *Paris*, a Woman, who, by a Blow on her Head, had a large part of the *Frontal*, with as much of the two *parietal* Bones, came away whole together, by which the *Dura Mater* lay expos'd for a vast compass, yet notwithstanding it incarn'd, though it never harden'd so, but the *Oscillation*, or alternate Motion of the said Membrane, continued manifest: For the Defence therefore of the Brain, and this tender *Penthouse* over it, she wore always a Cap of beaten Lead, and carry'd about the large Portion of her Skull, as a Cup to receive Alms in.

All which, with many others I could recite, some of them falling under my own Knowledge, should encourage us not to abandon these miserable People, whilst alive; but still to do our utmost for their Preservation, since it often falls out, that the Accidents of this kind, though seemingly very desperate, have notwithstanding been recovered: But it is time we come to the Method of Cure.

In every great *Contusion* then of this Part, I *The Cure.* mean the *Head*, whether by Blow or Fall, if your Patient loose his Senses, raves or utters any incoherent Words; also, if *Vomiting*, *Palsy*, *Spasms* or *Convulsions*; if *Sopor* or Snoring, as in a *Lethargy*, or like one in a profound Sleep, having taken away a convenient quantity of Blood from his Neck, or, if that cannot be conveniently done, from either Arm, you are to cause his Head to be shav'd, and then strictly examine all Parts of the *Scalp*, as before directed: When if you find no *Depression* of the Bone, or separation of any Part giving way, and crackling as it were under your Fingers; or having no direction to the Part injur'd by the Patient's lifting up his Hand, shrinking from you, or winching when you are upon the same; you are then to enquire of the By-standers, if there are any to be found who were present at the Accident, what part of the Head came first to the Ground? Or after what manner the Stroke was given, or the Blow receiv'd? As well as by what sort of Instrument? In which place you may sometimes discover an *Echymosis*, or *Sugillation*, if not *Fluctuation* of the extravas'd Blood underneath: upon which Part, or as nigh as may be for the *Sutures*, and *temporal Muscles*, (which last, as formerly noted, must sometimes be divided, when you cannot otherwise come at your Work) you

you are to make a cross Incision, or in other Form more advantageous, where these happen to lie in the way, through the *Scalp* to the Bone: And, having rais'd the *Pericranium* round about, in order to the Operation, you are for this time to content your self, and dress up dry, or with Restringents, if there be occasion, as we have directed for the *Wounds* of the *Scalp*, with the *Cranium* denuded of its Cover.

After this, the Symptoms no ways remitting, but the *Sopor* especially still continuing, let the Physician be call'd in, that by *Vesicatories*, sharp and *stimulating Clysters*, together with proper *volatile, cephalic* Medicines, the Spirits may be rous'd, and a Revulsion made from the Parts oppress'd: After which, waiting till next Day the Issue of your Incision, and physical Prescription, the first of which sometimes only by giving a Breathing to the Part, no Damage having befalln the Skull, taking off the *Tention*, removes the Symptoms, the Patient quickly after recovering his Senses, and requiring no farther proceeding with the Instrument.

- HIST. 37. " When *Charles*, the Son of *Philip*, King of
 " *Spain*, by a Fall down Stairs, had exceedingly
 " contus'd his Head, and was thereby convuls'd,
 " *Vesalius* being sent for, immediately made a
 " crucial Incision of the *Scalp*, in order to bore
 " the Skull: But the Symptoms hereupon disap-
 " pearing, the Perforation was set aside." But
 we have no need of foreign Instances of this
 kind, since every one, who has been any thing
 conversant in Practice, must have observ'd as much.
 Having then remark'd the Consequence next
 Day, of the preceeding Incision, and finding the
 Symptoms to require, you must proceed to bore
 the *Cranium*, by setting on the *Trepan*; and in-
 deed

deed in some Cases, where there is great *Depression*, and the Membrane underneath thereby offended, unless the *Hæmorrhage* restrain your farther proceeding at that time, it may be requisite you set on the Instrument sooner.

The deferring this Operation by reason of the *full Moon*, at which time we are told the Brain riseth higher than at others, and consequently renders the same dangerous, is certainly hazardous; for were not the Supposition of such Matter of fact groundless, as I believe it is, yet must the Danger by delay, in some of these Misfortunes, be still greater.

I have trepan'd Children of five, six or seven Years of Age successfully, and yet in these Subjects the *Dura Mater*, and the Brain it self, lie much higher and closer to the *Cranium*, than in the Adult, being contiguous doubtless in the *Fætus*, as is evident by the Tracts or *Sulci*, exculp'd on the concave Part of the *Cranium*, by the Blood-vessels of the said Membrane: And therefore, in this tender Age, the steadier Hand, lighter Pressure, and more leisurely Motion of the Instrument, with all necessary Circumspection, will be wanted: But the Neglect of performing it, even in those still younger, which is forbidden by some Writers in Surgery, if there be no other way to free the Membrane from the depress'd Bone, which by its Points or Angles cut in, and tear the same, the Symptoms thereby heighten'd; this, I say, seems to me a sort of indulgent Cruelty, or abandoning these little ones to a greater, for fear of the lesser Danger.

Langius informs us, that he had open'd a Child's HIST. 38. Head of three Years of Age, and that in three several places, on account of a fractur'd Skull, and had succeeded: The Symptoms of *Convulsion*,
Coma,

Coma, *Paralyfis* going off, after the Discharge of a *Cruor*, intermix'd with *Sanies*, by the several Openings.

HIST. 39. *Trinkavellius* mentions such another, where he was forced to perforate, that he might come at certain Fragments of the *Cranium*, which had made way thro' the Membranes, and were struck into the Brain.

I say not this, by any means to encourage a rash Enterprize, of which, I think, none have kept themselves clearer than my self; but I must enter my Opinion on this wise, that where one has miscarried under the Operation, meerly by *Trepanning*, there have been three or four times that number lost, by its not being done at all, and many others from delay, or not timely enterprizing thereof. But, proceeding, let your *Apparatus*, when going about the Work, be as follows, ready at hand.

1. Your *Syndon* of Silk or Sarsenet, double, of a circular Figure, suitable to the intended Bore; rather wider in its Dimensions, that, lying under the Edges, the Membrane may be thereby the better secur'd therefrom; this must be strung with Silk, for its easier Extraction. 2. Your dry Dossils, to fill up the Wound, with a soft circular one for the Bore, or to be laid lightly down upon the *Syndon*. 3. Your Pledget, to lie over all, arm'd with *Liniment. Arcaei*. 4. Soft Bolsters of Cloth, for the outside; And, lastly, your double-headed Roller.

These being all ready, with the Medicine for dressing up of the Membrane, or in which the *Syndon* must be dipp'd, you are to take an Instrument of a suitable Bore, well set for the Work, with its Pin fix'd, and placing the Patient's Head commodiously on a Pillow, in a good Light, where

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where it must be kept steady by the Hands of your Assistant, stopping first his Ears, especially if he be sensible (and indeed I see not otherwise any occasion for so doing) lest the jarring Noise of the Saw disturb him; when, fixing the said Pin on the Bone, you turn gently backwards and forwards, till the Teeth of your Saw have made a circular *Sulcus*, or Furrow: After which, there being no farther hazard of slipping out of the Tract you have thus made, you may take out the Pin, and, cleaning the Teeth of your Instrument with a Brush provided for that purpose, enter it again, bearing still harder till you are got through the first Table, or down to the *Meditullium*, called the *Diploe*, or *Interstitium* of the two Tables, which you will know, as you lift up the Instrument, by the Blood issuing into the *Sulcus*: When again proceeding warily, more especially in Children, whose Skulls require not so strong a Pressure, and whose Brains, as we but now observ'd, lie high, with the *Dura Mater* as it were contiguous to the inside thereof; so that here the *Motto*, *Festina lente*, is worthy your remembrance, lest otherwise, by Inadvertency, you break through of a sudden, and wound the Membrane: For your farther security against which, it behoves you to lift out your Saw, not only to brush or clean the Teeth, and to oil them afresh, if there be found occasion, for their pleasanter working, but, with the end of your *Probe* or *Spatula*, to examine the Depth of your Tract or Furrow, that you may the better know on which side to bear hardest, passing lightly over that which is most divided, till the Piece, beginning to shake round about, is now only held by some small Particles of the inward *Lamen*, or, which will readily give way to the *Elevator*, entering that part
of

of the Bore where you perceive you had got quite through.

And indeed this Way of proceeding, particularly with Children and young Subjects, I prefer to the advancing farther, or dividing the Piece all round entirely, and taking it up, as may fall out, in the Bore of your Instrument, or off the Membrane, where it sometimes falls down, for the Reasons above.

I remember the first little one I trepann'd, an Accident of the first kind befell me, and put me, as well as the Warden, who stood by, into great Consternation; for, missing of the Piece, we were fearful, finding a Rent in the *Crassa Meninx*, that it was fallen through upon the Brain, till farther recollecting, and taking up the Instrument I had been working with, I perceiv'd it fast shut within the Bore.

But I shall not enlarge farther here, upon this Operation, having laid down the Method of my own Process, in a Case of this kind before observ'd, wherein you will find a *Diary* of Practice from the beginning to the end; unto which however I shall add this farther Caution, leaving the same to your own Judgment when ripen'd by Experience, whether or no it may be worthy to be remark'd: That is, when you are enter'd the *Diploe*, before you raise your Instrument, if it be not better to proceed and cut a Trace in the second *Table*, lest hastily, or at unawares, lifting it up at that Juncture as you are turning, you break off the first, which I once see fall out, to the incommoding the Operator, and perplexing the remaining part of his Work, altho' the Case seem'd indeed uncommon; the *Tables*, or external *Lamella*, proving very thin, and the medullary Interspace, or *Diploe*, large, soft, also in comparison,

or

or loose and spongy, like an *Exostosis*, or what falls out among some *Ricketty* Children, such being our present Case: But, to our purpose,

When, with the *Elevator*, you have rais'd the Piece, after the Operation so far perform'd, and with a *Lenticular*, if there be found occasion for its use, (which is not often, where the Work is well perform'd) smooth'd the edge of the lowermost *Table* from any Points or Angles thereof, likely to give offence to the subjacent Membrane: There is then, I say, no small Controversy about the Nature of the Medicaments to be apply'd thereto, call'd *Dura Mater*, or *Meninx Crassa*, to distinguish it from that underneath, which immediately invests the Brain, term'd *Pia Mater*, or *Meninx Tenuis*, or in which your *Syndon* must be dipp'd or moisten'd, that is, the Piece of Silk or white Sarfenet, before-hand fitted; so that, being laid down into the Bore, as above directed, it may extend beyond the Edge of the Perforation all round, for securing the Membrane aforesaid.

To this end some commend the *Spir. Vini cum Mel Rosar.* or this latter with a few Drops of *Bals. Peruan.* Others, the *Ol. Rosar. cum Resina*, for which Mr. *Wiseman* was a strenuous Advocate; others again, the *Ol. Hyperic. cum Syr. de Ros. Siccis, vel melius eodem Melle*; others, the *Ol. Lumbric cum Bals. Tereb.* Either of which, I must indeed think preferable to that of *Galen*, the *Acetum Vini*, which he orders somewhere, as I remember, for the first Application.

But as to the Nature and Quality of these Medicaments, you are very much to be guided by the Age, Habit of Body, and especially the degree of Putrifaction that may happen to attend, together with the Time or State of the Inflammation.

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I must confess, whoever applies first of all the *Spir. Vini*, although admix'd with *Mel*. seems as if he intended to *deterge* before he had *digested*, which is preposterous, and prejudicial in any Wounds, much more in those of so noble and sensible a Part as this; Wherefore, I think, for the first Dressing, there is nothing better than the warm *Liniment* of *Arceus*, or Mr. *Wiseman's* Medicine aforesaid, the *Oil* of *Roses* and *Rosin*, with which he begins and ends, subtracting only from the first after Digestion, and adding more of the last, or, instead of the *Oil*, putting in some *Mel Rosar*.

But when the Membrane is digested, there is no Objection against the said *Mel cum Spir. Vini*, or, supposing the Part very foul and putrid, the *Tinct. Myrr. & Aloes* in place thereof; nay, in a higher degree of Putrification, I have us'd the *Flos Ung. Ægypt.* with the *Liniment*.

The *Bals. Tereb. cum Ol. Hyper.* is likewise a suitable Digestive for these Wounds, or this of the Author last recited;

Rx Tereb. Venet. ℥i ℥s. Ol. Hyper. ℥ ℥s. Pulv. Thuris ℥j. cum Vitel. Ov. q. s. f. Linimentum.

In case of Pain, the *Ol. Lumbric.* may be substituted.

A *Detersive*, for this use is prepar'd likewise in manner following;

Rx Tereb. ℥j ℥s. Mel Ros. ℥j. Suc. Plantag. & Apri a ℥j. coque ad Suc. Consumptionem, dein adde Far. Hord. ℥ ℥s Sarcoc. ℥ij. m.

This may be made also a *Sarcotic*, by adding of the *Pulv. Myrr. Mastich. & Aloes a ℥j.*

Where the *Pia Mater* and Brain it self are injur'd, the same Author lays down this which follows;

Rx Suc.

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℞ *Suc. Beton.* ℥iv. *Calamentb.* ℥ij. *Flor. Centaur.*
Min. p. j. *Hyperic. p. ij.* *Vini odorif.* ℔j.

Infunde per dies tres & coq. ad Suc. Consumptionem,
cola & adde Terebinth. claræ ℥j. *℞. Gum. Elemn.*
Spir. Vini sol. ℥ij. *Ol. Hyper.* ℥i *℞. Mel Ros.* ℥jv.
Coq. iterum paulisper, & addendo Pulv. Myrrb.
Aloes, Thuris, Sang. Drac. subtilissime trit. à ℥j.
f. Unguent.

Having digested your *Membrane*, mundify'd and incarn'd with these or the like Remedies, so that the *Flesh* begins to rise up even with the upper edge of your Perforation, you are then, or rather earlier, to dress up dry, lest otherwise a *Fungus* rise, as frequently happens in these Cases, (though, I believe, usually by the want of timely Care to prevent it) and give you great disturbance: To obviate this, I have sometimes sprinkled the *Pulv. Ros. Rub. Cort. Granat. Flor. Balauſt.* or such like, continuing those exiccating Remedies till the new *Flesh* begins to harden, and the edges of the *Bone*, mouldering off, turn into a sort of *Callus*; being, by length of time, afterwards as it were ossify'd, and proving usually as strong a Fence as other Parts of the *Skull*.

And this is the Method to be observ'd in making way to the *Brain*, or its *Membranes* oppress'd, whether with or without a *Fracture*.

However, there being *Fractures* of this *Bone* of very differing kinds, as we observ'd at the entrance upon this *Section*, and calling for a divers Management, we shall give you some farther short Instructions, for your Conduct relating thereunto, under the following Heads.

First, That if, after *Trepanning*, you find any grumous Blood or Matter upon the *Membrane*, not

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able to discharge it self by the Perforation, tho' favour'd by the Position of the Head for that purpose, it may be requisite at sometimes that you make a second, in a Part more convenient for venting the same.

Secondly, That, having perforated as before, and discovering neither *Fracture*, *Fissure*, or *Extravasation* upon the outward *Membrane*, nor yet, upon the most diligent Examination, perceiving any other Part of the *Cranium*, which, being bor'd, would be more likely to relieve the Patient, the Symptoms of *Sopor* or *Delirium* still continuing, the *Membrane* inflam'd lying high and turgid, with a Fluctuation as it were of Matter, perceptible underneath; the Case hereby grown as it were desperate, for the farther Relief of the Brain, you are to penetrate the *Dura Mater*, dressing up as we have above directed; taking special care at these times, that both the *Syndon*, lying in the Perforation, and particularly the soft *Dossils*, which are dip'd in the *cephalic Balsam*, and let down upon the *Pia Mater*, or Brain it self, be ty'd fast with Silk or Thread, the Ends of which are to lie out of the Wound, for their future Extraction.

Thirdly, Where there is Depression of the *Cranium*, provided it be small, like the superficial Dent in some *Pewter-Pots*, the Patient young, without *Convulsion*, *Delirium*, *Stupidity*, or other mischievous Symptom attending, you must not presently go to work with your Instrument, but, treating the Case as a *Contusion*, and bleeding your Patient, let the Physician be call'd in, to direct what other Evacuation may be found necessary, leaving the rest to Nature, who sometimes of herself raiseth it insensibly, or admits it there to continue, without farther detriment: At such times

times it was customary with *Aræus*, to apply this following:

℞ *Sordities Alvearis Apum*, vel s*ed* id haberi minus possit, *Ceræ novæ sordidæ*, & *Mel com.* à ℥ij. *Lapid. Hematit. Pulv.* ʒ ss. *Lap. Pumic. Cymen. Absinth. Furfur. com.* à ℥ij. m. omnia ad ignem ut f. modo *Emplastri* quod loco depresso (inquit ille) impresso latiore etiam ambitu duorum digitorum, mira enim vis hujus *Emplastri* est ut intra xii. dies ossa contusa compressaque tollat nullumq; ad eam rem, medicamentum efficacius esse puto.

Where there is only simple Contusion, without Depression, this following is by the same Author recommended;

℞ *Ol. Rosar. Chamomel.* à ʒ ss. *Myrtin.* ʒj. *Vitel. unius Ovi cum Album. Pulv. Myrtil.* ʒi. cum *Far. Fab. & Hord.* à p. æ. q. f. ut f. instar *Emplastri*.

A Gentlewoman, very nearly related to myself, has the most considerable *Impress* of this kind, occasioned by a Fall in her Infancy, that I ever met withal; there being Room to hide a Finger in the Dent, on the back part of the Head. Hist. 40.

But where the *Depression* is such, that both *Tables* being fractur'd, any Points or Angles of the Bone bear hard against the *Membrane* underneath, exciting those desperate Symptoms before enumerated; 'tis then your Duty without delay to call in Help, to make a circular Incision of the *Scalp*, and taking out the Piece, which is here preferable to the cross or any other angular Incision, especially where the compass of the Bone beat in is not exceeding large; which done, if the Flux of Blood will admit, you may try at the

same time to lift up the depress'd Bone, if you have room to enter your *Levator*, at the broken edge; but if not, as is usually the Case where the outer *Table* is broke off, the inner only bow'd, or not sufficiently open to let in the end of your Instrument, you must then pitch upon some proper Place for the *Trepan*, and, before you dress up, draw your Knife semicircularly the compass of a Shilling, towards the edge of your *Depression*, taking at least such compass, as that you may have footing thereby for your Instrument on the firm Part; raising up the *Pericranium* also, as you did before, in that for laying bare the *Depression*, by your circular Incision above-mention'd: Then dressing all up dry, when the Day after, your *Hæmorrhage* being secur'd, you are to perforate the *Cranium* on the stable Part, for which you had made way, and, through the said Perforation carefully passing in your *Levator*, to lift up the Bone, dressing the *Membrane* as we have before discours'd.

Fourthly, In setting on the *Trepan*, you must take care that you shun the *Sutures*, contriving also, as far as possible, that your intended *Bore* may answer the design, both of raising the Bones sunk in, and discharging any extravas'd Blood or Matter; that you may not, as taking notice of before, lie under the necessity of Censure, by being oblig'd to repeat the Operation, which yet cannot sometimes be avoided; in order to disengage a *Fracture*, where it happens one part to be shot under another, or lock'd in thereby, after such manner, that I have, in the like case, been constrain'd to *bore* in three distinct Parts; and at length to saw off the Interstice, before I could relieve the *Membrane*, and take away the offending Fragment.

I re-

I remember, when a young Practitioner, I was Hist. 41.
 call'd to a little Girl, who had receiv'd an Accident at the flying Horse in *Moorfields*: The Child unhappily running into the Way, just as they had knock'd off the Machine; when an Iron-Pin in the forepart thereof, thus let fly with a prodigious force, struck into the Child's Forehead, and fractur'd the Bones of the *Cranium* in a miserable condition; one part being forc'd under the other; the wound had been treated by a *Barber* as superficial, taking off whose Dressings, I plainly perceiv'd some of the Brain mix'd with his Balsam, and passing an Instrument, observ'd there was admittance farther than I car'd to venture.

Believing the Case desperate (she lying all this time convuls'd and stupid) I dress'd up however for the present with the common Applications, and next day tracing the Fracture, and making way for the Instrument, by opening of the Scalp, I call'd in Mr. *Bernard*, perforating the first time while he was present, the Membrane appear'd fair and clean; yet, by this single Bore, we were not able to relieve that part of it, which was oppress'd by some Angles of the other fractur'd Bone: On which account soon after I made a second, and saw'd off the Interstice, containing the double Fragment, or Part giving disturbance, the Membrane lying now in view for a large compass, yet nevertheless incarn'd afterwards, as kindly as could be wish'd, giving no other than the small trouble of keeping down the luxuriant Flesh, that it might lie even with the neighbouring parts of the Skull.

From the *Sedes* on the Forehead, we had daily some portion of the Brain ran out, in all probably a Spoonful, which at length ceasing to flow,

there ouz'd forth a large quantity of a clear Liquor or *Lymph*, near a Pint, as we might conjecture by the wet Bolsters, in twenty four Hours; which continu'd, tho' daily lessening, till the edges of the Perforation mouldering off, some Grains of Flesh, arising from within, intercepted the same, which growing callous, quickly after with the other Parts at the top, a *Cicatrix* was induc'd over all: The Patient being now grown a lusty Woman, a Wife and Mother: And, from the time she receiv'd her Hurt, at least, after that of removing the offending Bones, when the Convulsion left her, through the course of my Attendance, was not otherwise affected, than by the symptomatic Fever and Headach, to which, between whiles she is yet somewhat liable: But, to proceed.

That part of the *Cranium* also, above the *Orbit* of the Eye, is likewise forbid the *Trepan*, by reason of the *Sinus* under, as is that over the *Longitudinal*; also the inferior part of the *Occiput*, opposite to the fastening of the *Dura Mater* on the inside: Besides the Situation here would favour the *Exitus* of the *Cerebel*, as well as that of the extravasate Blood or Matter.

But I shall no farther enlarge, by giving Rules for the setting on of the Instrument, unless this farther one, that no Person attempt to meddle therewith, who has not first well acquainted himself with the bony *Compages*, and whole *Encephalus*, or the Structure of the *Cranium*, as well within as without; as also of the *Meninges*, and the Brain invested by them: And, for his farther Instruction, it may be necessary he frequently work with the Instrument upon human Skulls, especially of *Malefactors* newly strangled, or others lately deceas'd, where such liberty may be given without offence.

Fifthly,

Fifthly, In *Fractures* of this Bone, when you have made way for the relief of the Brain, and reduc'd the broken Parts into their places, such of them particularly as are not entirely separate, you are to take care that no more of the said *fractur'd Cranium* be remov'd, than necessity calls for; at leastwise any large portion thereof, by which the *Membranes*, and sometimes the Brain it self, may be expos'd, at best, the Cure protracted: For since we see daily, that other Bones, divided in like manner, are united by mediation of a *Callus*, Nature is as little wanting here, from the broken Edges, together with the *Diploe*, or marrowy Interstice, to provide a *Cement* for their Coalition, more especially in those we call Wounds of the *Cranium*, where large Pieces are sometimes divided by a Sword or Scimiter, in close Engagements, and have been left adhering to the *Pericranium* and *Scalp*, which, being replac'd, and the external Wound stitch'd up, have after been found united as other *compound Fractures*.

Sixthly, In *Fissures* proceeding no farther than the upper *Table*, if no Symptom appear, you may rugine the same till it becomes obliterate, and dress up as, in other Hurts with a bare *Cranium*, we have formerly advis'd, where there is necessity of *Desquamation*.

The like is to be observ'd for the superficial *Sedes*, or Impress made therein by some pointed or sharp edg'd Instrument.

But where the Crack goes deeper, or through both, with bad Symptoms concomitant, you must carefully trace it from the Rise to its Extent, if possible, that so you may be the better directed where to fix your Instrument, with greatest advantage for the discharge of Blood or Matter, falling on the *Membranes*, and there exciting such Symptoms

Symptoms as aforesaid: Or, if the Chink be large enough for the Purpose, the Operation may perhaps be spar'd, unless those Accidents are urgent.

Seventhly, In a *Sedes* penetrating both *Table*, or from whence the *Dura Mater* is also wounded, and an Inflammation thereof arises, if the Orifice is small and insufficient, you may *trepan* upon the Part hurt, placing the *Pin* upon the *Sedes*; taking care however that it enter not too deep, and that it be remov'd so soon as you have cut a Tract through the first *Table*, or made a sufficient Furrow therein.

Lastly, In the *Camarosis*, or vaulted *Fracture*, with an *Arch* at the top, where the same lies high above the other Parts, as, in forcibly drawing forth the offending Weapon, may fall out; you must endeavour the depressing such rising Part to its place, raising up that which is sunk for relieving the oppress'd *Membrane*: Which having done, if the said arch'd Part cannot be brought to coincide with the rest, it may yet be more safely left to Nature, till, separating therefrom, it may be taken away, whilst the *Membrane* underneath *incarns*, and is after *cicatriz'd*, as other Accidents of like kind.

And this is what we thought necessary to lay down concerning the *Fractures* particularly of this Part, of which some of the Antients had such obscure *Ideas* about the Use of the *Trepan*, as to render the Operation in a manner desperate and perilous. *Arceus* himself, the Author of that famous *Liniment*, or artificial *Balsam*, of which we have given such just Praise and Commendation, which, still goes by his Name; this Person, I say, was wont to lay so great a stress thereon, that, by the alone Assistance thereof, and his Plaster

Plaster over it, he tells us he had recover'd many of these *fractur'd Skulls*, some of which were deem'd deplorable and desperate, without meddling with any Instrument.

Vidius, Jun. I find was of the same Opinion with some others, trusting commonly to their *cephalic Plaisters*, in many of these Fractures, especially of young Children, where there has been no Wound accompanying the same; alledging (which is nothing strange) these Bones will unite as well as others; and that the extravasate Humours will sweat through the Pores, in like manner as we find in those, where the Bandage is found stain'd therewith, the Skin remaining whole all the while. But I would advise the young Practitioner not to rely, after so unreasonable a manner, upon this Remedy, or any other *Topic* however excellent, as an Application to the wounded Parts; whether the *Scalp Cranium* it self, or the Membranes underneath, where these last are oppress'd, and the Symptoms urgent, occasion'd by any Fragment of the Bone beat in, or extravas'd Blood and Matter pent up, which make the Perforation of the *Skull* now absolutely necessary, which of it self has nothing in it formidable.

Botallus indeed informs us, that he once cur'd a Child of seven Years old, where found so great Contusion of the *Scalp*, and so much of the *Skull* fractur'd, that he was at a loss how to proceed; and therefore, in great measure committing the Cure to *Nature*, he cover'd the Head with a Composition, *ex Bolo Armena & Myrtul. Bac. contus. & exceptis cum duplo Rosacco, cum una parte Aceti & altera Alb. Ovor.* by which the Child recover'd without the Operation: But then he makes this just Reflection, *Ceterum quod bis meis*
ex-

experimentis quisquam fidere debeat, ut omnes sic curare posse putem, id prorsus empiricum & ab omni ratione esse alienum, cum nihil in medicina sit stabile, unde ex re nata mutare consilium & praesidia opera praetium sit: Thus he.

We have already caution'd, that you take great care of the cold *Air*, at your times of dressing these Wounds; which, if in those where the *Cranium* only was bar'd, we thought very requisite, must surely be much more so accounted, where the *Membranes* covering the *Brain*, and sometimes this latter it self, happen to lie expos'd.

The Like may be said of the *Regimen*, as to the other *Non-Nat.* which is most strictly to be observ'd at these times; and by neglect whereof, some irregular People, who were before in a hopeful way of Recovery, have miscarry'd.

HIST. 42.

On the 24th of *February*, 1708-9. I was call'd in much haste to a Child about the Age of six Years, who was just then brought out of *Moorfields*, wounded by a Catstick, as he was sitting at some distance from a Cock, set to be thrown at; where a young Fellow, missing his aim, unfortunately struck the Child over the Head, and knock'd him down: He was taken up for dead, and continu'd speechless for some time.

Upon examining the Head, I perceiv'd a small Wound on the right side, which had bled freely, and, laying my Fingers hard upon the Part, under a sort of Quagmire of grumous Blood, I found there must be a considerable Depression of that part of the *Skull*.

Whilst I was delivering my Prognostic of the Child's great Danger, and telling them of the necessity there was to make way to the Fracture, by removing some part of the *Scalp*, the Boy began to cry; and fell a vomiting. Having no Assistant

sistant then by, nor Dressings suitable to the Operation, I contented my self for the present with the common Restringtons for staying the Flux; sending for a *Barber* to shave that side of the Head, whilst I open'd a Vein in the Arm, and took about six Ounces of Blood; then, applying a Defensative over that part of the Head, I roll'd up the same, intending to proceed farther, if Necessity so requir'd, the same Evening; at what time I found my little Patient perfectly sensible, but complaining of his *Headach*, still throwing up all he took: I order'd a *cephalic Julep* to be taken two or three Spoonfuls betwixt whiles, and left him for that Night.

The next day I call'd in Mr. *Blundel*, and together visiting, we found the Child had been hot and restless all Night; his retching to vomit having left him: When we had taken him out of bed, and plac'd him in a good light, I took off the Bandage and Dressings, and, passing a Probe into the Wound, plainly felt the *Cranium* for a great compass denudated of its Covering.

I began to draw a semicircular Line on the outside of the Depression, as a Direction for my Knife; and another perpendicular from the one Point to the other, that we might feel the Extent of the Fracture, before we remov'd any more of the *Scalp*. Then, whilst Mr. *Blundel* kept the Head steady, I cut through my half Circle to the *Cranium*, and found I was just beyond the Edge of the *fractur'd* Bone; but, drawing my Knife upon the strait Line, it slip'd in a considerable distance from the surface unawares; which my Assistant perceiving, I withdrew the same to make way for his Finger, by which he discover'd so great a Vacuity, that we concluded the Bones were beat through both *Meninges*, into the Substance of the *Brain*.
Upon

Upon this, he approved of my making another Semicircle, and, taking off the *Scalp* on the opposite side, by which we might have the whole Fracture in full view, accordingly I dispatched the Work, and took from the *Scalp* a Circle, in all as large, or somewhat larger, than a Five-Shilling-Piece; when immediately we discover'd this vast Fracture and Depression (exactly enough delineated in the following Table) of four Angles, sunk so low beneath the surface of the other Part of the *Cranium*, as to make a Cavity sufficient to contain near two Ounces of Liquor.

The outward Table was broke all round, whilst the inward was only bow'd; upon which account there was no room for an *Elevator*, or indeed any other Instrument, by which we could hope to raise up the depressed Bones, without the help of the *Trepan*. The *Terebra* was propos'd, but concluded insufficient as well as hazardous; insufficient to lift up the Bones, unless we could go quite through; and hazardous, by going through, of wounding the *Dura Mater*; which, if not lacerated by the prodigious Stretch, must needs bear tight against the inside of the fractur'd Bone. The *Trepan*, in so young a Child, was thought likewise to have its Danger; the Membrane in young Children lying high, and in a manner contiguous to the inside of the *Skull*.

However, here was no room for long delay, the foresaid Part subjacent being so wonderfully oppressed by the Points of the Bones, through the Clefts of which we might perceive a manifest Oscillation. Yet for the present we could do nothing more, being disturbed in our Work, by a Flux of Blood from an incis'd Artery, to the Mouth of which I clapped a small Button of Lint, dip'd in equal Parts of *Bole* and *Vitriol*, fill'd up the cavity

vity and edges with dry Lint, and a Compress wrung out of *Oxycrate* and *Albumen Ovi*, strew'd with *Farina Tritici*, to be laid over all, and roll'd the Head up again for this second Dressing.

I visited in the Evening, and found a quick Pulse, Thirst and *Headach*; especially toward the Forehead, but no Vomiting. He was very sensible, and indeed bore up beyond expectation, yet, in consideration to the disturbance we had given to the whole animal Oeconomy, by that morning's Work, I prescrib'd for him as follows;

R̄ *Aq. Ceras. nigr. ℥j. Paon. C. ℥ij. Syr. de Meco-*
nio ℥ ℞.

Misce, & exhibeatur, hac nocte hora somni.

As a Preparative to this Draught, a Clyster was administer'd the same Evening. Notwithstanding all this, the Child slept little and unquietly.

Next day, which was the 26th, I call'd upon my Brother *Blundel*, who was himself now laid up with the *Gout*. It was agreed for that Day, to defer taking off the Dressings, in consideration of the Flux, unless some more threatening Symptom should appear; to obviate which, I directed thus;

R̄ *Pulv. è Cbelis Canc. C. de Gutteta a gr. x. Misce*
sumat quamprimum in Cochleari Julapij sequent.
superbibendo cochl. ij. ejusdem repetatur mane ac
vesperi.

R̄ *Aq. Ceras. nigr. ℥ ℞. Paon. C. ℥j. Spir. Lavend.*
℥ ℞. Syr. Paon. C. ℥j.

Misce fiat Julap.

The 27th, I visited again by my self found the Child somewhat feverish, but without other ill Symptom.

Having

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Having his Head supported, betwixt the Hands of an Attendant, upon the Nurse's Knee, I began to malax the Bandage and Dressings (very stiff by reason of the effused Blood) with a little *Ol. Rosar.* and after some time, clear'd all away; taking care to secure the Application upon the wounded Artery, which from the first Dressing bled no more.

I now could plainly perceive the Extent of the Fracture, which lay all in view, and finding it would be fruitless to attempt the Reduction of the depress'd Bones to their proper places, which were so fast lock'd in, by any other means, resolv'd to make way for setting on the *Trepan*.

Whilst I was making ready, I ordered a *Stupb* to be express'd out of the following Decoction, and apply'd over the Wound;

℞ Summit. Centauri Hyperici ā m. j. Flor. Chamomel. m. ℞. Betonic. Rorismar, Lavend. ā p. ij. Bulliantur in Aq. Fontis ℥ ij. ad consumptionem dimidij, addendo sub finem, Vini Alb. ℥ ℞ refervetur Colatura pro fotu.

Having apply'd two or three warm Flannels, and filled up the cavity with dry Lint, I concluded the best part for trepanning, as likewise for the *Elevator*, would be above the Fracture; which, being seated on the right *Bregma*, was bounded forwards by the *Coronal*, backwards by the *Lamdoide*, upwards by the *Sagittal*, and downwards by the *squammous Suture*: And indeed so near to this latter (as may be seen in the Figure hereto annex'd) that there was not room for the *Trepan* below. When I had therefore drawn a Circle above, within a quarter of an Inch, or less of the broken edge, I took out a proportionate Piece of the *Scalp*, almost the compass of a mill'd Shilling,

ling, which my Patient never winched at; although he told his Nurse the day before, he thought, at his first cutting, we would not leave him, 'till we had taken off all the Flesh from that side of his Head. I had now no occasion for any Restraining; so that, dressing up the Bones all dry, I apply'd a large Pledget of *Liniment* upon soft Tow over the Lips, and rolled up his Head for that day.

His Drink, which was indeed his whole Diet, was *Milk* and *Water* boiled together, *Barley-Water*, *Water-Gruel*, and betwixt whiles a small *Sack-Whey*. A Clyster was repeated also at this time, and his *Anodyne* at Night.

This Preparation being made for the Work, I went to Mr. Warden *Herenden*, stated the Case, and appointed a Consultation at 3 next day, after Dinner; desiring he would not fail me, that I might be justify'd in the Operation. Accordingly, on the 28th, being provided of a good Instrument with a Bore of the smallest Size, and a suitable *Apparatus* for the Work; at the Hour appointed he call'd on me, and entering my Patient's Chamber, when he found him on his Feet, walking about the Room, he seem'd amaz'd, as ready to surmise the Case had been mis-stated, and that probably we might spare the Operation. I was not in the least concern'd hereat, well knowing he would alter his Sentiments, upon sight of the Wound; and, taking off the Dressings, he seem'd astonish'd, that a Child, under such a violent Pressure of that most noble Part, (the Source of all the other *Membranes*, if we may trust a late new System) from the forcibly intruded Bones, should labour under no worse Symptom than a *Head-ach*, and be in a Condition to walk about the Chamber.

Pleas'd with the Child's Courage, he plac'd him against the Nurse's Bosom, and took upon himself to keep his Head steady, whilst I began to work with the *Trepan*; observing that admirable Axiom, *Festina lente*, I gently turned the Instrument, now and then taking it up to clean, 'till I had got to the *Diploe*; when lifting it out again, brushing off the Saw-dust, and, laying the Pin aside, I proceeded to work farther; examining with my Probe betwixt whiles where I was got through, and bearing down upon those Parts where I found I was not.

In few Minutes the Work was dispatch'd, and being willing to have it out as clear as I could, without having occasion to shiver off any part that might remain undivided by the Saw, I thought to pass gently a Turn more upon the adhering side, and so remove my Instrument; when, at first somewhat surpriz'd, we mis'd the perforated Bone, and were ready to surmise, the *Membrane*, being somewhere lacerated underneath, had let it in, and return'd by its own proper Elasticity again to its Convexity; but, looking into the Instrument, we found it in the Bore. I hint this as a Memoir for the young Artist; for 'twas not truly my Intention to have it taken so out: Nor did I suspect, that one gentle turn would have cut asunder that Part, which just before did seem to stick too fast, to hazard the breaking off.

The *Warden* was pleas'd however with the Operation, the edges of the Bone were so exactly smooth and even, that we needed no *Lenticular* to come after, for to polish the Work. The *Dura Mater* appear'd fair, tho' somewhat florid from its Inflammation; and now we immediately set about the lifting up the depress'd Bones; in order to which, passing carefully my *Elevator* thro' the Perforation,

Perforation, and heedfully observing that the *Membrane* might not slip between my Instrument, and the fractur'd Bone I was about to raise, I began to lift, having plac'd the end of the said Instrument under the Centre of the larger and most likely of them; when, bearing up with considerable force, I found it would not stir; on which account I drew back my *Elevator*, and, arming its Shank with a soft Rag, plac'd also a Linnen-Bolster upon that part of the edge of the sound *Cranium*, which was to be its *Fulcrum*.

Being thus provided, I convey'd it in once more, and with redoubled force perceiv'd it began to give; continuing the same force, it immediately flew up, and shiver'd off the inner *Table*.

This Bone extracted, our Work was much facilitated, nor had we farther occasion to pass our Instrument thro' the Bore; for, by shifting our *Fulcrum*, or resting upon another Part, we could command the other Pieces at our Pleasure.

There had been a Debate the day before, betwixt Mr. *Blundel* and my self, whether, after extracting one or two of the Bones, we should not leave the Remainder, having rais'd them up to their places, in expectation that they might agglutinate, or unite by intervention of a *Callus*; by which the *Dura Mater* would be defended from lying bare so large a compass, and our Work shorten'd, in respect to the Cure, if such a thing might be accomplished. However, finding them all break upon their Elevation, and fearing some loose Angles might irritate the *Membrane*, creating to us more and greater disturbance, it was now concluded they should be all taken away, and very happily they were so, as appears by the Sequel.

Q 2

Having

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Having removed these four pieces of Bones, of the exact Shape and Dimension with those express'd in the annex'd Scheme, the *Dura Mater* began to vibrate strongly, and rais'd itself at the same instant, to fill up the surprizing *Chasm*; which, wiping gently with a piece of soft Sponge, wrung out of a little warm Claret, I presently cover'd that and the bor'd Part with a suitable Syndon of white Sarfenet, dip'd only in *Mel Rosarum*, continuing my dry Lint upon the Lips, and, having laid the Digestive over all, roll'd up his Head.

After the Work was over, he was carry'd to Bed, being refreshed with two or three Spoonfuls of his *cephalic* Julap.

From this Day our Work seemingly went on with a prosperous Aspect; the *Cephalagye* much abated, the Pulse grew calm, and the Child lively; so continuing for four or five Days. The *Dura Mater*, both in the place of the Perforation, as well as that where the Bones had been extracted, began to be sprinkled with little Grains of Flesh, only, in the midst of this latter, there appear'd a kind of Slough, occasioned by the Points of the depress'd Bones, which, by grating hard, had rais'd the outward Membrane; to digest and hasten Separation, of which, I dress'd those Parts with a little of the *Balsam. Terebinth.* added to the *Mel Rosarum*.

No sooner was this Part mundify'd, and a sort of granulated Flesh had cloathed the bare *Membrane*, but our *Head-ach* returned afresh with greater extremity than ever, the *symptomatic Fever* and Restlessness also accompanied; so that, on the fifth of *March*, about five Days after the Operation, upon taking off the Bandage, I perceived there had been a much greater Discharge than could be reasonably

reasonably expected from the outside Wounds; and removing the Dressings, to apply a *Stupb* wrung out of the Fomentation, took notice of an offensive Smell, when looking carefully upon the *Membrane*, through a small *Papilla*, or Grain of the new incarn'd Flesh, where the Slough had thrown off, there ouzed out a foetid Matter from underneath.

Believing the Case to be desperate, I armed a small Pledget with *Linim. Arcae*, dipping the same in the afore said Mixture of *Mel. Ros.* and *Bals. Tereb.* to apply on the Part, whence the Matter issued forth. The other Parts of the *Membrane* I covered with the *Syndon* of Sarsenet, moistened only with the *Mel. Rosar.* and, clapping the edges of the Silk under the shiver'd edge of the *Cranium*, that the subjacent noble Part might not be offended thereby, I dressed as before, and rolled up the Head.

The next Day intending to make Apertion through the *Meninx*, and relieve the Brain of the fluctuating Matter, I acquainted Mr. *Herenden*, told him what I had discovered, and the necessity of our farther proceeding.

March 6. we met in Consultation, where we found the Matter somewhat lessened in its Discharge, though still abundantly too much. The Lips, which the Day before were fallen, looking white and flabby, and the incarned *Granules* of Flesh upon the *Membrane*, which were then sinking, and of the same Colour, had now as it were revived, and put on a fresh Complexion; nor could we perceive the least Drop of Matter, bursting through in any part of the *Membrane*, or any room for a Probe, where I had remarked it ouzing forth.

Upon these Considerations, though the Symptoms still kept up, without Remission, I mean

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the *Fever*, *Watching*, and *Head-ach*, yet Mr. H—, surmizing I might be mistaken in my yesterday's Remark, or hoping the Matter (lodging only betwixt the *Duplicature*) had made its *Exit*, persuaded me to dress up, and endeavour to relieve the Child some other way; to which purpose, upon farther Consultation, it was agreed, that I should presently open the *Jugular* on the same side, out of which running briskly, and in a full Stream, we drew six Ounces of Blood. A *Vesicatory* was also applied to the Neck, and an *emollient* Clyster thrown up in the Evening. The *anti-epileptic* Powders were repeated, with the addition of two Grains of *Sal. Vol. C. C.* to each Paper: The *cephalic Julep*, *ut antea*; and, if the *Head-ach* did not remit by the next Day, Leaches were concluded to be set behind the Ears, as also to each Temple.

The 7th, I called again, and understood by the Nurse the Child had a bad Night; was then hot and restless, and cried out of his Head.

This Afternoon I took off the Dressings, perceived the Bandage and Compress were fouled with the Matter, likewise the Pillow he had laid on, which confirmed my Belief that it was highly rational to make an Apertion, thro' the *Dura Mater*, and that without so doing, all other Endeavours would prove useless.

The Dressings taken off, I plainly observed from whence the Matter had come forth, but could not find a Passage for my Probe, although there was a small Drop of Matter in the Mouth of the *papillary Excrescens*, the supposed Place of its Vent. There being no Artift by to justify my Proceeding, I dressed up again as before, the *Warden* having promised to meet me on the 8th; during which Interval, so great a quantity of the

the purulent Matter had work'd out, as to afford some Relief to the *Brain*, so that the Symptoms grew milder: He tried at this Dressing with his Probe, but could find no entrance: The Wound looked fresh, and the Incarning ruddy, tho' not much increased for three or four Days past. However, much contrary to my own Sentiments, I was again prevailed upon to dress up, continuing my wonted Applications, and to wait a little longer, to see what farther Time might produce, unless fresh Symptoms called for a Penetration, of which I was to give notice.

Thus we continued the 15th, the Pain betwixt whiles remitting and returning, a stinking Gleet with much Matter upon our Dressings: One Day we seemed to get Ground, but the next lost it: The Lips again grew flaccid, and the Flesh upon the *Membrane* loose and pallid; so that, resolving to wait no longer, I went again to Mr. H—, and told him, I should lose my little Patient, if he would not comply with my dividing the *Membrane*: He readily offered me his Assistance, and came according to his Appointment.

When we came into the Chamber, the Child was crying very dolefully of his Head: There was a fætid Smell by the Bedside, from the putrid *Effluvia*, arising from the pent-up Matter: And tho' we were sensible there was far too great a quantity to proceed from the Wound, yet could we not, even at this Dressing, discover the Orifice that had let it out. The *Systole* and *Diastole* of the *Membrane* likewise hindring us, from apprehending any Fluctuation under our Fingers: So that I cannot any ways blame, nor would I reflect by any means upon that Gentleman's Judgment, and great Caution in this Affair; he having never seen the Matter arising out of the incarned

Flesh, as I had done, and might think, perhaps, I was therein deceived.

I was at this time extreamly unwilling to dress again, 'till I had given a freer Vent; and attempted the Search once more with my Probe, yet still without Success: At last, pressing hard down upon one side of the strongly resiliating *Dura Mater*, a small Drop of Matter blubber'd out of the aforesaid *Papilla*, which Mr. *Warden* perceiving, immediately took out a fine Probe from his Box, and, pressing gently down, got in; very readily giving way to make an Apertion: whilst his Probe, which he bore up underneath, was to guide my Lancet; with which Direction I passed the same in, and made a Wound about a quarter of an Inch in length; when, searching more narrowly with the Probe, we found (having not the Discharge expected) that it was got betwixt the Duplicature of the *Membrane*; so that, without delay, examining again, he soon got under to the *Pia Mater*, raising up the Part, as before with his Probe, I cut close to the side thereof, 'till I had made a Wound of half an Inch, by which we discharged a vast quantity of stinking *Pus*, interspersed with two or three small Globules of the *Cortex* of the *Brain*.

By this last Incision, we were put to a Dilemma, a small *Capillary Artery* being divided in the inmost Coat of this *Membrane*. Here was no place for biting *Stiptics*, nor indeed for the common Restringtons; some part of which, with the utmost Care, must inevitably fall in upon the *Brain*, and there produce very bad Effects, if not the most direful Symptoms: Nor was there, by any resisting Body underneath, any hope that by Compression we could stay the Flux.

The Moment of its spirting up, Mr. H——, with an armed Probe, pressed close upon the Mouth thereof, which did me double Service, by restraining its bleeding and dilating the Wound, whilst I conveyed a Dossil tied round with Thread, whose End hung out for the secure Extraction, dipped in the above mentioned *Mel Rosarum*, into a small quantity of which, for correcting the Stench and Putrification, I had beforehand instilled a few Drops of a *Tinct. Myrrb.* drawn in White-wine. Clapping this down softly upon the tender *Meninges*, or rather upon the *Brain* itself, the *Pia Mater* being here eroded, and having made up a second Dossil somewhat tighter, and fitted to the Dimensions of the Wound, tied likewise with a Thread as the other; whilst he took away his Probe, I clapped it close upon the wounded Vessel, which being but *capillary*, we were in hopes would soon be choaked by this kind of Compression.

Being dressed up, he was carried to his Bed, Mr. H—— acquainting the Parents, that his Case was truly doubtful, if not absolutely desperate: and I myself indeed believing, I should not often dress him after. However considering with the great *Hippocrates*, that there is a *τὸν θεῖον*, in *Morbis aliquibus*, and having found that there often occurs an *aliquid Miraculi*, in the wonderful Escape of these little Innocents, I resolved to leave nothing unattempted, justifiable by Art, for this little Champion's Recovery.

Having no more to do at present, we took our Leaves, when I had first (for his Refreshment) prescribed the following *Julap*;

R *Aq. Ceras. nigr. ℥v. Pæon. C. Angelic. C. ā ℥ ℞*
Sal. Vol. Oleos gut. xxx. Margarit. p. p. 3 ℞. Sacch.
Albis q. s. Misce

Misce fiat Fulapium perlat. cujus sumat Coch. ij. in languoribus, tempore usus agitetur Phiala.

The next Day, after opening the *Membrane*, the *Fever* and *Head-ach* did again remit, our Patient was manifestly relieved: And, what is a remarkable Instance of the Truth of that grand physical Axiom, *Nature est sui Conservatrix*, we could perceive the *Dura Mater* plainly to do the Office of a Pump, throwing off at every *Systole* a large quantity of the offensive Matter, together with several considerable *Tbrombi* of the grumous Blood, which had been effused from the bleeding Artery, and fallen inwardly upon the *Brain*.

At this Dressing likewise I apprehended some small Particles of the *Brain*, mixed with the Matter and Blood aforesaid.

Thus we continued on the mending Hand: So that in a few Days more our little Patient began to call for his Play-Fellows, and walked sturdily about the Chamber. The Matter daily lessened, grew perfectly sweet and well concocted; altho' still more quantity thereof (upon removal of the Dressing) we could discern to be lifted out by the Vibration of the *Membrane*, whose proper Elater, (as I just now hinted) well supplied the Place of the *Antlia*, or Sucker in the Pump or Syringe, casting off the offending Matter, so far as lay within the Sphere of its Activity.

The same Applications were still continued, leaving out the *Tinct. Myrr.* and putting in daily a soft Dossil through the Wound, dipped only in the *Mel Rosarum*, upon the *Pia Mater*; the *Syndons* being also moistened in the same, which were laid upon the upper *Membrane*; 'till such time as it was firmly incarned, and the Flesh even

even with the Superfice of the *Cranium*; about which time I left off the *Mel Ros.* unless a small Pledget upon the wounded Part of it; using nothing but dry Lint, which, however despicable, is surely the best of Dressings at these times, by which and a slight Touch of the *Vitriol Stone*, I kept off the luxuriant Flesh (at some times troublesome, when improperly treated), and disposed the edges of the Bones for Desquamation, which in seven Weeks time was accomplished: A small part only, and that upon one side, exfoliating visibly.

By the 10th of *May*, our incarnated Flesh grew callous, the Pulsation underneath but little perceptible, and a sound *Cicatrix* brought over to the very edge of the Apertion, which had been made upon the *Dura Mater*; and through which we had still a Discharge of laudable *Pus*, though inconsiderable to what it had been.

We kept him all this while to his first Allowance of *Water-Gruel*, *Panada*, *Barley-Gruel*, *Milk-Pottage*; his Drink chiefly *Milk* boiled with *Water*; but, growing brisk, and playing about as chearfully as ever, when he had been purged two or three times with *Manna*, he had the liberty of a more free and airy Chamber; and indeed trespassed so far as to get down Stairs, to eat, though sparingly, fresh Meat every other Day; and could not be restrained from all his usual Exercises and Diversions.

Our Business was now to contrive the keeping open the Wound I had made in the *Dura Mater*, which was ready to close upon us, though of the utmost Consequence to be kept therefrom, whilst there was any Matter to be drained off.

Mr. B—, being got abroad, was easily prevailed upon to give us a Visit, and, having inspected

spected the Work, passed in his Probe down to the *Pia Mater*, but finding no slanting *Sinus*, only a direct one to the *Brain*, concluded there was no dilating: for indeed, where should we cut, unless upon this lower *Meninx*, or into the *Brain* itself. Our Work was all in the dark; nor could we know the Source of the Matter, daily discharging in small quantity; so that all we could do, was to prevent the Coalition of the Wound, hoping that in time the said Matter might be cleansed off, or insinuate itself up higher into the adventitious body, that was there formed from the Vessels and *Membranes* circumjacent, when we might with more safety enlarge, and give a freer Vent.

For keeping the Wound open, which was the more difficult in consideration of the Part, I proposed a little *Camula*, but he rather preferred a Bit of Sponge-Tent, which he thought would not only lie much easier, but, imbibing the Matter, discharge it at the same time.

With this I complied, and put in a small Piece, fastened about with a String on the upper part.

Next Day, when I came to open the Wound, I found the Matter, as I feared, was entirely pent in; nor had one Drop of it passed either by the sides, or through the Pores of the Sponge; but, drawing the same forth by the Thread, a considerable quantity (collected in the twenty four Hours past) gushed forth, and continued to be thrown off by the *Systole* of the *Dura Mater*, 'till it had emptied the Cavity of all it could lift up.

The Orifice being now enlarged by the Tent, I applied a small Pledget of Liniment on the outside; having before-hand dropped in, with a Feather, a Drop or two of *Mel Rosar*. and observed

served this way of Dressing, still breaking asunder the uniting Fibres, with my Probe, where they were ready to coalesce; and, dipping its end in Oil, besmeared the Lips of the Wound, by which means the Matter, which became now again inconsiderable, made its way without obstacle.

And thus we continued to the middle of *May*; our young Gentleman growing fleshy, and enjoying a better State of Health, than he had done some Years before.

About this time, meeting my Neighbour Dr. *Morton*, and my Brother *Blundel*, in Consultation at another Place; and passing by my Patient's House, I invited them to walk in, where they saw him dressed, and took a view of the extracted Bones. Mr. *B*— had the Curiosity again to examine the Wound, and, having the Probe streight down for about half an Inch, discovered a slanting *Sinus*, not before observed, as very likely but lately made; when, drawing it forth to bend the End, he passed the same in again, and, lifting up the Extremity, we could perceive it near an Inch distant from the Place it entered.

Having made this Discovery, I resolved, if the Discharge continued much longer, or any Symptom returned, to cut into this Cavity: For I had taken notice that several of our late Dressings had been remov'd by the Child's scratching: Inasmuch that although the same Bandage was all along continued, yet by the Disturbance from breeding of Lice, from Dandrif, or Humour under the *Cuticle*, some one, or all these Causes, there grew so troublesome an Itching, that in the Night he had got all off: The Wound was then closing, and a dry crusty Scurf, or caked Matter had choaked up the Orifice.

The

The same Day the By-standers had observed a sort of Rigour had seized him, which went off in a Moment. Whilst I was dressing him next Day, I perceived somewhat of that kind, and asked him what he ailed? He replied, briskly enough, he could not tell, nor could he help it.

The Wound was again opened by the *Digressive* I had applied the Day before; and the scabby Crust cast off, with a small quantity of Matter as usual. To prevent the like Inconvenience of rubbing off his Dressings, I laid over my Pledget a more adhesive Emplaster, clipt the Hair close, and, rolling up his Head, carefully cautioned him to keep his Hands off.

I was very much concerned at these Rigours, and fearful lest the Matter should have got into the Blood, or tainted the Nerves, by insinuating it self thro' the cortical Part of the *Brain*; but did not expect the Surprise so sudden: for early next Morning I was alarmed with the News, that the Child was seized with a violent *Convulsion*. I hastened, and found him senseless, very strongly twitch'd on the contrary side: The *Tendons* of that Arm and Leg especially, perpetually relaxing and again contracting: Upon which, till they thought fit to send for a Physician, I prescribed thus to their *Apothecary*;

Rx *Aq. Ceras. nigr. Rutæ a ʒij. Pæon. C. ʒj. Tinct. Castor. ʒ ss. Syr. Pæon. C. ʒj.*

Misce & dentur Coch. ij. quam primum; repetantur tertia vel quarta quaque hora.

Rx *Pul. de Gutta ʒj. Sal. Vol. C. C. gr. ij. Fiat Pulv. exhibiatur mane & vespere, cum Dosi ejusdem Julappii.*

Rx *Spir. Lavend. C. ʒij. Sumat. gut. x. in omni haustu- lo Liquoris appropriati.*

Rx *Decoct.*

R̄ Decoſt. com. p. Clyſter. ℥ ℞. Ol. Chamomel. Ruta
ā ʒj.

Miſce, injiciatur ſtatim. Applicentur veſicatoria Brachiiſ
internis, & pone utramque aurem.

Having made this Proviſion (the beſt I could
ſurmize) for his Relief; whilſt the Medicines
were preparing, I had him taken out of Bed, and
ſtrongly ſupported upon the Knees of an Atten-
dant, I took off the Dreſſings, which were in a
manner dry, and paſſing a Probe, there being no
room either for Sciſſars or Director, into the Si-
nus diſcovered two Days before, and, turning in
the ſame, I felt the End as formerly; taking
out my Knife, I carefully cut through upon my
Probe, and let out the ſame; In doing this we
loſt no Blood; nor can I ſay indeed any Matter
was let out: So that, filling up the Wound, I had
now made, with a Doſſil armed with Liniment,
and moiſtened with the warm *Balf. Terebinth.* with
a Pledget of the ſame over it, and the uſual Plai-
ſter, Compreſs and Bandage, he was laid in his
Bed, where preſently after I perceived the *Spaſmus*
grew milder.

Returning to him in the Afternoon, I heard
they had held him, in the manner I left him, for
near an Hour; that he had been ſeized with two
or three Fits ſince; but, from the firſt *Paroxyſm*,
they obſerved a *Palsy* on the Arm of the ſide af-
fected, which was thereby become incapable of Mo-
tion; for the Relief of which I was thus directed;

R̄ Ol. Lumbric ʒj. Spir. Lavend. C. Aq. Regin. Hun-
gar. ā ʒ ℞. Ol. Succ. Petrol. ā ʒj.
Miſce, & inungatur Spina Dorſi, tepide, mane ac veſ-
peri, à Nucha ad Coxygem uſque.

In the Evening I return'd again, found the Child sensible; his Fits had been off and on, at two or three Hours distance: He then complain'd of being sick, and rech'd to vomit; his *Head-ach* also was very troublesome.

May the 18th, which was the Day after these *Convulsions*, I undressed his Head, and found all things had an ill Aspect: The Wound was indigested, the Lips puffed up, and risen to a considerable height above the rest of the Parts, discharging only a bloody *Serum*.

I fomented again, as I had done through the whole Course of my Attendance, ordering, each time the *Fotus* was taken from the Fire, two Spoonfuls of the *Aq. Hungar.* to be put therein, applied several warm *Stupbs*, and with my Digestive, made up as before. At this time I observ'd a *Lypothumia*, on which account I hastened them to lay him down in his Bed, administering some Drops of the *Spir. Lavend.* in a little of the *Julap*.

He continued sensible all that Day, still crying out of his Head, but at Night was delirious at some times.

The next Day I perceived the Wound was crude still, and no Sign of Matter: The turgid Lips turning livid, and a very languid Oscillation underneath. The whole *Membrane*, so far as had been bare, to the very edges of the fractur'd *Cranium*, was strangely hufft up or elevated.

I pass'd my Probe down cautiously upon the *Pia Mater*, and could feel all round a pappy *Ex-crescence*, which had incarned upon the lower *Membrane*, or was formed together with the upper and the adjacent Vessels, from whence arose (upon drawing back my Instrument) a small quantity of Matter.

I now

I now ventured to drop in a little of my *Bals. Terebinth.* to the bottom of the Wound; and as to the rest, dressed up as the day before.

May the 20th, he grew *comatose*, crying faintly now and then, his Head, and dropped asleep. That Night his *Spasms* returned, with which the *Paralytic* Arm was chiefly and severely handl'd, the Wound tending to Gangrene; which I scarified, snipping off some Part of the Lips at the same time; but had little or no Blood following either my Scissars or Lancet.

Seeing now no Advantage to be gained, but only Disturbance to the Child, I dressed him for that time, with a somewhat warmer Application, on account of the Gangrene; concluding to give neither my self, nor him, any more Trouble.

That day and next, the *Convulsions* were seldom off; and, when they were, he was perfectly stupid: Sometimes indeed he would attempt to speak, but could not.

However, on the 22d, finding him still alive, I thought it would be deemed an Omission, if I did not inspect his Wound: And, as he lay along, I took off the Dressings, found the Lips flabby and subsiding, so far from appearing to digest, that every thing tended to a suddenly approaching Death. Having covered up his Head again, I took my leave.

The next Day, which was the 23d of May, I had notice given me, he was dead.

Thus did this little *Hero*, of truly manly Courage, who had struggled under, and got through so many Difficulties, and seemed now, in vulgar Estimation, to have been well and out of danger for a long time past, at last de cease, after four-score and four Days. And indeed had there been nothing more than the Fracture and Depression;

(how desperate soever they might seem) yet his Cure had been compleated in a much shorter Time. But considering the large Abscess upon the *Pia Mater*, its Rupture or Erosion, from whence there issued (as Mr. H—— can testify) some of the outward substance of the *Brain*, it was little wonder Nature should succumb and baffle Art: But very surprizing, that for three Month's time, whilst Matter lay upon this noble Part, neither *Palsy*, *Spasm*, *Sopor*, nor so much as a *Vertigo* should invade; but, on the contrary, that the Child should eat, drink and sleep, as actively tumbling about with his Companions, and as ready (if he had not been prevented) to stand upon his Head, as any of them all.

I am very confident, I should not have magnified my own Judgment, had I succeeded in this Cure, which the Gentleman aforesaid was pleased to allow, would have been one of the greatest had been performed in *England*; and if so, I think I may say, *Elsewhere*. As it was, I thought there would intervene somewhat worthy of Remark; and accordingly (as I generally do of rare Cases) I made this *Ephemeris*; which, if it should not furnish matter of Instruction, as I hope it may, to my younger Brother; yet will it let him see, how near he may come to the Accomplishment of his Work, and at last meet with Disappointment.

The Day after his Death, I took with me a small capital Saw, and a dissecting Knife, and placing the Head to my Advantage, I divided the *Scalp* from the Base of the *Occiput*, close by the *Sagittal Suture*, to the top of the Forehead; then turning it down, together with the *Temporal Muscles*, which I raised at the same time, over the Ear of the wounded side of the Head, with the back

back of my Knife, I cleared off the *Pericranium*; and with my Saw, guided by a Line of Ink I had drawn beforehand (on the top as well as on that side) I got through the *Skull*; which being remov'd with the end of my *Spatula*, the right Hemisphere of the *Brain*, I found would come into view, by only clipping off the *Dura Mater*. But before I began to meddle with this latter, having raised up the side of the *Skull*, I took special notice of that Part of the *Membrane*, which I had formerly divided or cut into, and of the subjacent *Pia Mater* and *Cerebrum*.

I perceived there had been ingendered a fibrous Substance, but whether springing from the tender *Meninx*, or complicated together of both *Membranes* and Vessels? was not so easy to determine. Two or three Days before, it seemed to be an Inch thick, but after Death, growing flabby, it parted upon the least Touch, and was fallen off from the upper *Membrane*, though here and there continuous with the under one.

When I had removed this interposing Body, I expected to find some latent Abscess upon the Substance of the *Brain*, at least upon the *Pia Mater*: Where all that was conspicuous, (an Indication there had been such) were the larger Ramifications of the sanguiferous Vessels, upon the Surface of their *Membrane*, whose Cavities, instead of their naturally contained *Cruor*, were implete with a transparent *Pus*; more especially those upon the anterior *Lobe*, under the *Os Frontis*, where the *Headach* was at first, as well as at the last, continually pointed to.

Cutting into the cortical Part of the *Brain*, I found all free and clear, as in a sound State: The *Ventricles* likewise, the *Oblong Marrow*, also the *Cerebel* were firm, and to the Eye untainted.

Of Fractures of the Cranium. Sect. VIII.

Being now minded to take a view of the other side, I divided the *Falx*, and, (without sawing off that Part of the *Cranium*) with my Hand, brought out the left *Hemisphere*: The Vessels on whose surface, in like manner with the right, were conspicuously turgid with the same Matter, a little of which, here and there, was shed upon the *Cortex* of the *Brain*: At the first Sight, I thought it might lie on the outside of the *Pia Mater*; but, going over gently with the back of my Knife, and wiping also with a soft Sponge, I found it not removed: So that in several Places, opening the *Membrane* with the Point of my Lancet, I perceived it lay immediately upon the Substance of the *Brain*, and issued out through each Apertion.

Having thus far satisfy'd my own Curiosity, I placed the *Brain* where I found it, and fitting to, the divided *Skull*, drew over the *Scalp*: which stitching up, and with the point of my Needle raising the short Hair, to cover the said Stitches, 'twas no easy matter for the nicest Surveyor, to perceive that the *Brain* had been taken out and inspected, or the *Cranium* meddled with: But this only by the by.

It may be now expected, I should descend to the *Ætiology*, and rationally solve, or mechanically explain the foregoing *Phænomena*: But as to this, I think, I may as well in general confess my Ignorance, as pretend to unfold that; for another Person's, which I never could elucidate to my own Satisfaction.

'Till the business of Sensation is better unravelled, than hitherto it hath been, or I fear will be; the Disorders of the *nervous System* may be conjectured, but not clearly demonstrated.

Whether

Whether there be any such Particles, as the animal Spirits, is not yet universally agreed on: That the Source of these Disorders lies somewhere in the $\epsilon\gamma\lambda\epsilon\phi\alpha\lambda\theta$, and that the nervous Bodies, thence arising, are some how or other the Cause *sine qua*, of Motion and Perception, seems incontestable. Thus far, I say, we may go, and trace out many Appearances: And from the Parts of Matter, as the same happen to be differently modify'd, may we also, by *mechanic* Laws, account for sundry Observables in the animal Structure: But how meer Matter, which way soever figured, can at first give, guide and govern the *Impetus*, is unaccountable. 'Tis here that the poor twilight of human Understanding is truly nonpluss'd: And what we argue must be still *à posteriori*. We may judge, having beforehand discovered the Effect produced, that the like, under similar Circumstances will be brought forth again: Thus, the *Quod sit*, is apparent, but the *Quomodo* out of sight.

'Tis manifest, the Blow upon our little Patient's Head, was the remote Cause of his Death, by occasioning a Rupture of some of the Vessels upon the *Brain*, which, shedding forth their Blood upon this noble Part, did there (being not discharged) produce an *Aposteme*: And when the purulent Matter was afterwards imbibed, or absorbed by some of the said Vessels, it might, in the way of Circulation, raise a *febril Effervescence*: And 'tis very rational to believe, that the same Matter also did impress a Taint upon the Nerves, exciting together an *Orgasmus*, to the Subversion of the whole Oeconomy.

But how, or after what Manner, and why the same came chiefly to affect the Arm on the contrary side? How, after a few Minutes, a *Para-*

lysis come on? How the nervous *Fibres*, with the *Tendons* of the *Muscles*, in that Arm and Leg, were so regularly and alternately haled, by the direful *Spasm*? is what I know little or nothing of.

'Tis true, I might make some Noise, and talk of venomous Exhalations, or malign and poisonous *Miasmata*, which, insinuating into the *Fibres*, like so many *Stimuli*, must needs twitch and convul those exquisitely sensible, the nervous Bodies. With some, I might denominate them *Acids*; with others, *Alkali's*; or, with our curious *mathematical* Gentlemen, I might essay to investigate the Configuration of their Parts, whether *Cubes*, *Cones*, *Prisms*, &c. and so let you into the way of their Operation upon the animal Spirits, or the nervous *Filaments*: And when I had gone thus far, a judiciously learned Man, would see I had harrangued to very little purpose: And that I might as well have owned, it was some how or other the Effect was brought about, but which way I could not tell.

Let the *Adept*, in *Albeism*, here strut and pride himself in his Recourse to a mundane Soul, or his omnipotent Nature: Let him take up with those unintelligible Terms of his *Archæus*, or his plastic Powers; whilst I, who never yet shook off the sacred Ties of Religion, and am self-conscious, how great a Debtor I am to his Munificence, look up to the prime Architect; the great *Αντιστοιχισ*, and cordially, as well as orally, acknowledge, that it was He that made me, and not I my self; that Man is fearfully and wonderfully formed, being perfectly ignorant of the *How*, and *when* *he was* *sa*.

In this Confession, I have the Suffrage of the greatest Men of the Faculty: Such, I mean, as the

the renown'd *Harvey*, and the famous *Lower*: The latter ingeniously acknowledging that it was the Prerogative of God, only who searcheth the Secrets of the Heart, to know the Reason of its Motion also.

To these, I may well add, that incomparable Benefactor to Medicine, and therein to Mankind, the judicious *Sydenham*, who, on this Topic, thus expresseth himself,

“ *Neque hoc mirum est, cum longè (imò supra om-*
 “ *nem humanum captum longè) credibilis sit nos*
 “ *Misellos homunciones, ab illustri vitæ lucisque Re-*
 “ *gione exulantes. Methodum qua in fabricanda*
 “ *Machina usus est sapientissimus Artifex, capere*
 “ *nullatenus posse; quam fabrem ferrarium rudent*
 “ *prorsus & imperitum, nescire quo pacto concinnetur*
 “ *Automaton horarum index, cujus Structura &*
 “ *Motus exquisitissimam Artis elegantiam præ se*
 “ *ferunt. Sicuti de facto constat Cerebrum omnis tam*
 “ *Sensus quam Motus fontem esse, tum etiam & cogi-*
 “ *tationum & Memoriae Officinam, & tamen non est*
 “ *possibile à diligentissimâ ejus inspectione contempla-*
 “ *tioneve mentem usque adeò illuminari, ut intelligere*
 “ *possit quo pacto Substantia ita crassa & quasi Pul-*
 “ *pa quædam neque operis, ut videtur, usque adeo*
 “ *affabrè elaborati, usui ita nobili & facultatibus*
 “ *tam præcellentibus queat sufficere, neque exinde*
 “ *assignare quis potis est, qua ratione ex Natura*
 “ *ejus vi & Structurâ partium, sive hæc sive altera*
 “ *ista Facultas necessario fuerit exerenda. Epist. ad*
Gulielm. Cole.

I hope this Excursion will be deemed pardonable, in which I was willing to take notice of the vain Arrogance of such as fancy nothing to be insolvable by their (supposedly) unbounded Comprehension.

I must confess, I would not willingly, by any Means, discourage that most noble and useful Study of the *Mathematics*, whose Improvements are so advantageous, so great and profitable to the Public, as well as satisfactory and pleasant to each Proficient therein. But yet I cannot see, that *Medicine*, strictly speaking, will be much advanced thereby: Nor how the Fluids or Humours of the Body, from a thousand imperceptible Accidents diversifying their Texture, are at all compatible with the strict and plain Rules of Lines or Figures. So that with a late Physic-Writer, I must needs look upon it, as an injudicious and vain Attempt for any, in order to discover the Nature of Diseases, to apply the Compass to a depraved Mass of Humours, or to endeavour to square the Circle of the Blood.

I am not unacquainted how many pretty Hints are given, how many probable Truths unveiled, for this, and future Ages, to build some farther Discoveries upon, in that most excellent *Baglivian* Tract, *De Motrice Fibra*. Yet, surely, those, who have been entirely ignorant of *Baglivi's* System, have done excellent Service to their Country in the Faculty of *Physic*: And truly, for my own Part, I ne'er expected to find more real Advantage accruing to Mankind in general, this Way, by the whole Clan of *philosophic* and *mathematical* Physicians, (notwithstanding some modern Flourishings) than has already, by that most diligently observing, and heedfully reflecting, the former of the aforementioned Authors. Whatever, others may opine, I neither know, nor am solicitous, being my self well satisfy'd, that nothing short of Omniscience, will ever be able to bring *Medicine* to bear strictly with *Mathematics*.

How

How improvable the humane Intellect may be in its new Cloathing, Futurity must determine: It is at present manifestly bounded, and that, in spite of all our proud Pretences, to a narrow Compass: So that the most knowing amongst us, knows truly only this, that the all-powerful and immense Being, who hath geometrically fabricated these Bodies of ours; and observed a just Number, Weight and Measure in his Works: Or in other Words, the supreme *καρδιογνώστης*, who gave Life to Man, the undoubted Master-piece of the sublunary Creation, fitted the great Spring of Motion, and set all the lesser Wheels a going in the most wonderful *Automaton*: That 'tis He, I say, and He alone, who can, and does foresee the Result of all the several Particles of Matter, traversing the Machine, under the Variety of each, or all their several Combinations.

*Some Inferences by Way of Corollary,
from the preceeding Discourse.*

1. THAT Wounds into the *Brain* are not always mortal.

2. That so far as the *Pia Mater* circumvolves, or enters into the Gyration of the cortical Part, there is a *Medium* of Union, or a *Basis* to incarn upon: So that, although this Part of the *Brain* be shed, the Sick or Wounded may recover: Nay, that, although great Portions of the same work out, we must not desperately forsake the Patient, since the shattered edges of this *Membrane* may fortunately, however unexpectedly, coincide

coincide and coalesce, to prevent the farther Eruption, and afford the said *Medium* to incarn upon. This conceded, it follows,

3. That Wounds upon the *Dura Mater*, how dubious soever, are by no means to be accounted desperate; and that 'tis justifiable Practice, after the Use of the *Trepan*, the dreadful Symptoms not remitting, and the *Membrane* outwardly discovering, no apparent Cause, to make Apertion thro', for the timely Discharge of the extravasate Blood or Matter underneath: The want of this Apertion, having rendered these Accidents too often fatal.

4. That neither the Fracture, nor depressed *Skull*, how extraordinary soever they might appear, were to be surmis'd, as the proper Causes of the Child's Death, in the foregoing Narrative, much less the Solution of Continuity made by the Lancet on the *Dura Mater*.

5. That the shedding some Portion of the *Brain*, as hinted by the first Inference, was none of the deadly Causes: But,

6. That his Death was owing to the effused Blood, from some Vessel upon the *Pia Mater*, which had been ruptur'd by the Concussion or Shock of the said Vessel, from the Force of the Blow; which Blood pent in, for want of a Discharge, had formed an *Abscess*, thereby deluging the surface of the *Brain* with Matter: And this, though continually draining off, through the Orifice in the upper *Membrane*; yet some part thereof, lying beyond the elastic Power of the said *Membrane* to raise up, and out of the reach of Medicine to deterge and mundify, was at length imbib'd by the Vessels; where, missing the salutary

Crisis,

Crisis, sometimes observed in the *Empyema* and *pluritic* Cases, it came at length, we are to suppose, some how to affect the nervous System, bringing on the fatal *Spasm*.

7. That the *Brain*, justly supposed the Fountain as well of Motion as Sensation, is a Body of it self senseless; that its Parts are not homogeneous; that its Substance is not strictly glandulous, nor properly medullary; that we may call it *Substantia sui-ipsius, vel proprii generis*, or, speaking plain truth, we may say, 'tis something, we know not what.

8. That we are very little acquainted with the *Modus* of Sensation, or *muscular* Motion, neither are we agreed, whether there be an Intrusion to, or an Emission from the *Organ*, of the *Species* to the Object? or *vice versa*: We know as little how the same is conveyed to the common *Sensory*, or the *Idea* there formed by the Soul: Nor is it uncontroverted, whether Sense, in the common Acceptation, is not better accounted for by simple Contract, after the manner of a Stroke upon a Line extended, which is no sooner given at the one end, than felt at the other; than by the *Medium* of those subtle Bodies, we call animal Spirits, which, how fine soever, yet is so instantaneous a Motion by them, to communicate the apprehended Object, altogether unintelligible?

9. That our Knowledge, of the Causes and Effects of some nervous Distempers, arrives but to a well grounded Guess, or rational Conjecture, and in likelihood will continue as inexplicable to the human Understanding, under its present limited Condition, as is the Essence of the Soul it self: On which account it is more becoming a
modest

modest Man, however learned, to act the *Sceptic* rather than the *Dogmatist*, with relation to these obscure and intricate *Phænomena*.

10. And lastly, that we must despair of bringing Medicine under exact *mathematic* Discipline, till the *Primordia*, or till the intire Nature of the *Corpuscles*, that make up the Body, are more clearly discovered to us; and that we can foresee the several Ways that Matter may be impress'd, by a differing Turn, or a new Modification: Which will scarce fall out, till we ourselves are got into a higher Class of Beings, than that of (too much self-conceited) Men. In the mean while, though we decry neither *Philosophy* nor *Mathematics*, when employed upon their proper Subjects, without which we are sensible no Improvement is to be made in the *liberal*, or in *mechanic* Arts: Yet can we not believe they will stand either *Physicians* or *Surgeons* in so much stead, as some fine spoken Gentlemen would induce us to believe, when they come to downright Practice.

FRACTURES of the Nose.

Fractures
of Bones of
the Nose.

WE shall next proceed, among *particular Fractures*, to observe some of those of the Bones of the Face; among which, especially those of the Nose, and Mandibles, or Jaws.

When the former is *fractur'd*, you must do your utmost to restore the broken Parts to their wonted Site or Places, since the Blemish here particularly left behind, is more discernable than others, and takes off exceedingly from the Beauty of the Face; which, if possible, as we said before of Wounds of the said Part, by all means is to be preserved.

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The

The Manner then of reducing these *Fractures*, is by the little Finger, where the same can be admitted; or with the end of a Pipe, or Skuer, armed with a soft Rag, thrust up the *Nostril*, and bearing outwards against the Depression, whilst, with the Fingers of the other Hand, on the outside, you settle the broken Parts into their Places: After which, to prevent their sinking down again, a small *Cannula*, or Hoop of Silver, fitted to the Cavity, may be introduced, to keep out the Bones, and at the same time favour the Respiration: In the use of which, you must be careful not to pass the same too high, which, by continually irritating, would render the Patient uneasy.

This Pipe may have a thin Rim, turning up a little on the outside Extremity, towards the *Alae Nasi*, being perforated for the passing of a narrow Ribbon, which, being drawn obliquely up, may be fastened to the Cap about the *Temples*.

Where the *Fracture* is rather prominent, or the Bones thrust outwards, having with your Fingers gently depressed and settled them, your little Finger of the other Hand, or Pipe as aforesaid, on the inside assisting you, and preventing their Subsidence beyond their proper Bounds, a Compress shaped to the Part, and dipped in *Oxycrate cum Alb. Ov.* must be laid over your *Defensative*, prepared as usually, *ex Diapalm. Bol. Acet. & Ol. Ros.* or a couple of thin *Splints*, of pasted Paper first soak'd therein, and shaped so as may best secure the Figure of the Part hurt, afterwards such Deligation as it will admit; concerning which, we must own, that the *French* are very curious; and in which, I think, their Excellency chiefly consists; yet some of these also may be very well spar'd; the simple Roller regularly turned, so as to humour the Parts, oftentimes satisfying the same ends:

ends: or, as in the present Case, a Cloth with Perforations well adapted, and as many Slits or Tails as are found necessary, for the more commodious fastening and orderly compression, as every Artift may contrive upon the spot.

Scultetus also has delineated many of these *Bandages*, in his *Armament. Chirurg.* which look very neat in the Sculpture: but some of them being reduced to Practice, I have found both troublesome to manage, and less secure, or more uncertain, than some plainer Contrivances for which I have changed them. Not that I would by any means discountenance the Ingenuity of Invention, to answer these Purposes, whether of our own or other Nations, or find fault with any such as have a real Use and Benefit, accruing by their Application.

FRACTURES of the Mandible.

Fractures
of the Jaws.

THE *Fractures* of the *Mandible*, I mean the lower, (the upper one being less exposed to these Accidents) are reduced by putting the Finger of the one Hand into the Mouth, on the same side, thrusting out the Bone which is beat in, whilst with those of the other, on the outside, you keep the adjoining Parts from starting, or, if rising, pressing them down again, that they may lie upon a level with their fellows; after which, a *Plaster-Compress* rightly shaped to the Bone, especially the prominent Part thereof, is to be laid on, with a *Defensative* covering the whole Jaw, and over that a Bolster, dip'd in *Oxycrate cum Alb. Ovor.* and a thin Pastboard, or Paper pasted, shaped to the *Mandible*, and soaked in the same. Lastly, the *Bandage* or *Muffler*, reaching from one Ear to the other, fastened to the Night-Cap.

And

And observe always in these *Fractures*, that your Patient carefully avoid the least Motion of his Jaws, taking his Nourishment, which for some time must be of the liquid kind, through a Spout or Pipe let down into his Porringer, whilst the other end, being put between his Lips, the same is leisurely drawn up thereby.

Farther, observe also, that in the Reduction of this *Fracture*, if it so happens that the Bones are shot over each other, whilst your Assistant holds the Head firm or steady, with his Hands, you are to clap two or three Fingers on the inside of the Jaw, directly against the fore Teeth, or *Incisores*, and gently extend by pulling it out towards you, till you perceive the riding Part meet even with the other *fractur'd* Extremity, which you are then to sink down into its place, keeping your other Hand on the outside, to prevent its slipping over the contrary way; or at least some other Person for you, where both your own are otherwise engaged in the Work.

Of the Fracture of the Clavicle.

THE next I shall descend to, is that of the *Clavicle* or *Collar-Bone*, which I have found the most frequently overlook'd, I think, of any other, till it has been sometimes too late to remedy, especially among the Children of poor People: For tho' they find these little ones to winch, skream, or cry, upon the taking off, or putting their Cloaths, yet seeing that they suffer the Handling of their Wrists and Arms, tho' it be with Pain, they suspect only some Sprain or Wrench, that will go away of it self, without regarding any thing farther, or looking out for Help; whereas this *Fracture* discovers it self as easily as most others:

others: For not only the Eye, in examining or taking a view of the Part, may plainly perceive a bunching out, or Protuberance of the Bone; when the Neck is bared for that purpose, with a sinking down in the middle, or on one side thereof, which will be still more obvious, if comparing it with its fellow on the other side; but when it is more obscure, and the Bone as it were crack'd only, a *Semifracture* as we say; yet, by pressing hard upon the Part, from one Extremity to the other, you will find your Patient crying out, when you come upon the Place, and, by your Fingers so examining, sometimes perceive a sinking farther down; with a crackling of the Bone it self.

As to the Reduction of this *Fracture*, it must be own'd the same is often easier replaced, than retained in its place after it is reduced: For its Office being principally to keep the Head of the *Scapula*, or Shoulder, to which at one end it is articulate, from approaching too near, or falling in upon the *Sternum* or Breast-Bone, it happens that on every Motion of the Arm, unless great Care be taken, the *Clavicle* therewith rising and sinking, the fractur'd Parts are apt to be distorted thereby: Besides, even in the common Respiration, the *Costæ* and *Sternon* afore said, where the other end of this Bone is adnected, together with the Motion of the *Diaphragm* rising and falling, especially if the same be extraordinary, as in Coughing and Sneezing, are able to undo your Work: Not to mention the Situation thereof, less capable of being so well secured by *Bandage* as many others.

All which duely considered, 'tis no wonder, that upon many of these Accidents, altho' great Care has been taken, these Bones are sometimes found

to ride, and a Protuberance is left behind, to the great Regret particularly of the Female Sex, whose Necks lie more exposed, and where no small Grace or Comeliness, is usually placed.

In order now to the reducing of this *Fracture*, or broken Collar-bone, having set your Patient on a Stool or Chair against the Light, so that you can come best at your Work, with an Assistant behind him, to keep steady the Head, whilst thrusting out that of the *Scapula* with one Hand, with the other you gradually sink or press down the rising Part, raising that which is depress'd, till you find both the Extremes to lie even, and upon a level: After which, still keeping on your Finger, let your Plaister-Compress, of fit size, be clapp'd down heedfully upon the Rising, over which your *Defensive*, next your Bolster or Compress of Cloth, dipped in *Oxycrate cum Alb. Over.* somewhat bigger than that of the Plaister-Compress; and over these, a larger Bolster of the like Cloth, covering all the rest: When with your double-headed Roller, placed first with its middle part upon the *Fracture*, you make a Cross both before and behind, passing under the one Arm-pit to the Shoulder opposite, and *vice versa*, till you have finished your Circumvolutions; your Assistant still keeping his Thumb or Finger on the Compress, the Shoulder also being kept out, till your *Bandage* is thus finish'd, when gently bringing the Arm down to the side, let it be kept there in the same Posture as if it had been broken.

For the farther security of this Reduction, and keeping out the top of the *Humerus*, I have seen *Ferula's* of Tin, shaped to the Figure of the Bone, and being first quilted, laid over the same; others also of strong Past-board, and some of Wood;

Of the Fracture of the Clavicle. Sect. VIII.

But I never found they answered expectation, or that they were continued without Uneasiness and Disturbance to the Patient: Wherefore I usually have contented myself with the former *Apparatus*, ordering the Sleeve of the Coat and Waistcoat to be ripped up, or some loose Garment to be put on, whereby there needs no pulling out or putting in of the Arm, in rising or going to Bed, to the hazard of displacing the broken Bone: And in Children, to prevent any irregular Motion thereof, I have sometimes taken a turn, with the same Roller, over the outside of that Arm, and thereby kept it close down to the side: Yet, as I have already observed, notwithstanding all imaginable Care, it will sometimes fall out, that the Points, especially of some untoward and oblique *Fractures* of this Part, will start or ride, and make a Bump or Knot very discernable, which is still less to be wonder'd at, when befalling some peevish and froward Infants and young Children, as well as grown People, who think much to be confin'd, but will be lifting up their Arms, and stirring them about, having no notion of their Connexion with the Part hurt, or Influence of the same, before the *Callus* is fast, or the *Fracture* cemented.

There is another Method propos'd for the reducing of this *Fracture*, practis'd also in replacing the same Bone out of Joint, which may be of service when both Extremities are so depress'd or beat in, that they cannot otherways be rais'd; and that is, by laying the Patient in a supine Posture, or flat upon his Back, placing some convex Body, as a wooden Bowl, or the like, betwixt or in the hollow of the *Scapulas*, when the Surgeon, stooping or kneeling, lays his Hand upon each Shoulder, forcing down the same, by which

which the *Sternum* being dilated, and rising withal, the depressed *Clavicula* is also forced up to its place: But this, as I remember, I have never had occasion to put in Practice more than once.

*Of the FRACTURE of the Scapula
or Shoulder-Blade.*

This *Fracture* is much more intricate, either befalling its *Spine*, where the Force was direct upon the same, upon its Neck; or its two *Processes*, the *Acromium* and *Coracoides*; when from above, or by falls upon the top of the Shoulder. In large muscular Bodies, these Accidents are difficultly discovered, at leastwise so that we can precisely say, what Part of the Bone is really concern'd, and how affected.

Of the Scapula, or Shoulder-Bone.

'Tis true, upon strictly feeling round about, we may perceive a crashing Noise, as well as upon moving the *Humerus* up and down, upon which the Patient makes complaint: We have likewise a farther Direction in meagre Bodies, as he sits or stands naked before us, at least these Parts made bare, by comparing the one exactly with the other; where, if the *Spine* or upper Ridge be broken or beat down, we may observe a Subsidence, or as it were falling in of the Muscles, which lie not up so full and round as on the other side: Upon the top likewise an Inequality will be discoverable, where the *Processus* are affected, some Parts bearing out, whilst others are sunk in.

Again, where the Neck of the *Scapula* is broke off (a Case I think not very common) the whole Arm must thereby not only be disabled in its *Elevation*, *Circumrotation*, and, putting it behind;

but upon each Motion, whilst your Assistant thus moves the Limb about, if with one Hand you take fast hold of the top of the *Scapula*, or its Neck articulating with the *Oss. Humeri*, your other upon its *Spine*, you may be the better enabled to make a Judgment whereabouts the Separation is, by perceiving the *fractur'd* Parts crashing one against the other.

We have already acquainted you, in the *general Prognostics of Fractures*, that those which are near to, or upon the Joints, are more mischievous than those which are farther off; and in this particular one, whether the same fall upon that of the *Humerus* entering, or the *Scapula* receiving the same into its Cavity; or admit the *Processes* only are broken off, the free Motion of the Joint may happen afterwards to be thereby someways impeded, and stiffened by the Intervention of *Callus*, so as to hinder the regular playing of the Bones.

In remedying therefore these Misfortunes, where the *Spine* of the *Scapula* is broken down or depress'd, if the outer Teguments with the *Super-scapular Muscles*, as in some corpulent Bodies falls out, obstruct not, you must endeavour, with your Fingers thrust underneath, to elevate the same; which having replac'd, with suitable Bolstering and Deligation, you are, as much as possible, to keep it up, which in lean Bodies is much easier effected.

The like in the broken *Processes*, and the *Cervix Scapulae*, where good Bolstering about the Juncture, properly adapted to keep the divided Parts together, with convenient *Bandage* suitably contrived, and managed for their farther security when conjoined, is all the Artift has to do; and truly all he can, whose greatest Care must be to
enjoin

Sect. VIII. *Of the Fractures of the Ribs.*

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enjoin Quiet, and to obviate the Symptoms happening to arise, *viz.* by Bleeding; also directing a proper *Regimen*, particularly as to the Patient's *Diet*; and when he has done this, as becomes him, I see not any Injustice, that he should be paid for a Cure, in which, if the Work succeed, *Nature* rather than *Art* had the chiefest Hand.

Of FRACTURES of the Ribs.

Somewhat related to these, at leastwise as to *Of the* their Obscurity in fat People, are the *fractur'd* Ribs. *Costæ*, or Ribs, which yet are accompany'd with more dangerous Symptoms of another Nature, *viz.* *Fever* and *Inflammation*, from the *Pleura* underneath, the broken Extremities of the Bones pricking and offending that sensible Membrane, which is much increased by the continual Motion of the *Diaphragm*, streightening and again dilating the Cavity of the *Thorax*, in which these Parts have a considerable share under their as constant Exercise, whence their Consolidating is retarded, and the Symptoms of *Pain*, *Fever*, *Cough*, with *Difficulty of Breathing*, kept up.

In reducing the *fractur'd* Rib, where the ends protuberate, let him be laid in his Bed on the sound side, whilst the Surgeon gently presseth down the started Extremities; and, if there be Depression, let the Patient at the same time endeavour, by the Management of his Breath, to raise up the same: This not succeeding, and the *fractur'd* Angles bearing still against the Membrane, a Pitch-Plaister, being apply'd upon the edge or border of the Depression, is suddenly to be raised or pulled off, that, together with the Skin, unto which it adheres, the Rib sunk down may also be lifted up.

Of Fractures of the Ribs. Sect. VIII.

For this Purpose, a dry cupping Glass has been also applied; but by reason of the Afflux of Humour thereby promoted, and the little Probability of elevating any great Depression, besides, as in the former Experiment, the hazard of encreasing the Inflammation of the *Pleura*, I think them scarce practicable.

The *Terebellum*, or Gimlet, is yet more dangerous, since, by an attempt to perforate the *fractur'd* Rib, you hazard wounding the *Membrane* close adjoining, and if you go not through, you will scarce have hold sufficient to draw up the depressed *Costa*; besides the Force used in boring, however carefully performed, is likely to sink the broken Bone down farther, if set near adjoining; much more so, if upon it, and if too remote, it will avail nothing: So that the last Remedy, all others failing, and the *Pleura* continuing prick'd by the Splinters, is by making Incision on the *Intercostal Muscles*, between the subjacent, or, as may best favour you, the superjacent Rib; and passing in your Finger, or a crooked Instrument provided for that purpose, through the same, you are therewith, bearing outwards, to force up and resettlement the depress'd Bone; dressing up the *Wound*, as we have shew'd among those of the Breast.

But indeed these Cases are very rare, I mean such as require this Method of proceeding: For generally speaking, as we remark'd above, concerning those of the *Omoplate*, or *Scapula*, in corpulent People, the *Defensative*, proper *Bolstering*, and suitable *Bandage*, when with your Hand, or Fingers, you have done what you can to replace the *fractur'd* Parts, perform the remainder of the Work: Or, in plainer Speech, *Nature* at these times having done the Business, the *Surgeon* is paid for the Cure: I speak not this, as if I meant

meant these Accidents were to be left to themselves, or trusted wholly to her Workmanship, but to intimate only, that when he has applied his Dressings, in the manner aforesaid, the great stress, in these *Fractures* more particularly, lies then upon the Aid of the *Physician*, who by all means must be called, that by prescribing his *Oily Draughts*, *Sperma Ceti Linētus's*, with *pectoral Decoctions*, after free and repeated Bleeding, as the Case may require, the Cough which often happens upon these Accidents, and obstructs the Cure, at least, when befalling those subject thereunto, may be moderated, and the Respiration as well as the Expectoration, render'd easy; *balsamic* and *traumatic* Remedies, being likewise to be administer'd, much after the same manner as were directed in our discourse of *Wounds* penetrating this Cavity.

Fractures of the Sternon, or Breast-Bone.

The *Sternon*, to which the Ribs aforesaid are annex'd by a *Synchondrosis*, or cartilaginous Medium, being itself of a grisly and springy Substance, is not so liable, to be *fractur'd*, altho' by Force it may be beat in; at which times the same method is to be put in practice, that we laid down for the broken and depressed *Clavicula*: I mean, placing the Patient on his Back, with some convex Body under him betwixt the *Scapulas*, afterwards dilating the *Thorax*, by suddenly pressing with both Hands on the top of his Shoulders, which sinking down, the *Sternon* is at the same time elevated, or raised up; of which see *Parey*, lib. 14. ch. 10. But the sudden force that must sink this Bone, at the same instant intercepting the Respiration, so absolutely necessary

to Life, and without which we can subsist but a few Minutes, is very like to destroy the Patient at the same time it is impell'd.

'Tis true, the Strength and Firmness of its Articulation with the Ribs is such, that, by gradually laying on of Weights upon a flat Board placed on the *Thorax*, as the Body lies along in the supine Posture on the Floor or Table, it is capable of supporting an immense Weight, and to live there-under for some Hours: An Instance of this we had lately experimented upon one of our Malefactors, refusing to plead, who being thus extended, sustained by degrees 400 lb Weight for near an Hour, and seeming, as it was thought just ready to expire, in a low Voice desired to be released from his Burthen, promising to plead, which was granted him; and the obdurate Miscreant, who had so long held out under this lingering Torture, and seemed on the point of expiring, begged for Respite, tho' in a State doubtless enough miserable from the Effects of his Pressure; yet chusing now in this Condition to spin out a few Days longer, and then, (but in another Manner) to be strangled with a Halter.

FRACTURES of the Vertebrae.

Of the
Vertebrae.

These Bones, whether of the *Neck*, *Thorax*, or *Loins*, being so firm and compact in their Bodies, are rarely *fractur'd*, or if *fractur'd*, by reason of the Compression of the *Pith* or *Marrow* they contain, and the Office thereof, the Consequence must needs be fatal: But their *Processes*, especially the outward or *Spinal*, are liable to these Accidents, which falling out, the broken *Spine* is, if possible, to be rais'd up into its place with the Fingers;

Fingers; after which, a small Bolster-Compress, that may support it, must be plac'd on each side: The like *Defensative* and *Bandage* being requisite at these times, as we mention'd for the *Clavicule* and *Scapula* broken: But if the *Process* is so divided, as I once met with it, that it separates from its Body, it either raiseth an *Abscess* upon the Place, and extrudes it self thereby, or lying pricking in the Flesh, and creating Disquiet underneath, Incision may be made, and the Bone extracted.

Fractures of the Ileon and Coccyx.

The remaining Bones of the *Trunk* are the *Illia*, Of the Ileon and Coccyx. call'd otherwise *Innuminata*, that is the upper and side-parts thereof, which form the *Pelvis*: The fore-part is term'd *Pubes*, the inferior *Ischia*, or *Ossa Coxendicis*; and indeed, I think, it is not undeservedly, that they have three several Appellations bestow'd upon them, since they are plainly so many Bones, conjoin'd by an intervening Cartilage, easily separable in Infancy, altho' *ossify'd* as it were by Age.

These Bones, I say, may happen to be *fractur'd*, as by great Falls from on high, lighting thereon upon hard Pavements; tho' it is not often, being better secur'd by their own Solidity and Situation, and less expos'd to Injury or outward Violence, than most others: And requiring no particular *Apparatus*: but, having by comparison of the Hips and other Parts concern'd, inform'd your self the best you can, as well as by your Hands and Fingers, examin'd the Condition thereof, and adjust-ed the sever'd Parts: Time and Rest only with your *Defensative*, also Bolsters properly plac'd, with your *Bandage* up the Twist and round the Waste,

Waste, being, I think, all that is requir'd, or can be done at these times, I shall pass them over, and come behind; where, on each side of the *Illia*, is plac'd the *Os Sacrum*, to whose lower part is fasten'd another, or rather three or four little Bones, going by the name of *Coccyx*, or Crupper-Bone, liable also to the like Accidents, which some rather chuse to call a *Dislocation*, but I think every Division or Separation, altho' of a Cartilage, by outward Violence, where there never was a preceeding Motion, may as well be deem'd a *Fracture*, at least a *Disjunction*, as a *Luxation* or *Dislocation*, which, in the usual Acceptation, implies a Bone out of Joint, and in which, before such Accident, there was a manifest Motion: But, submitting this, whether the Bone be separated at the Cartilage, and I think these Bones are seldom elsewhere divided, they are usually beat in upon the *Rectum*; the Accident most commonly happening upon missing the Seat, going hastily to sit down, or where the same at unawares, and in rustic Sports, is hastily pull'd from under one, especially if the Stool was high, and the Fall sudden, from whence great Pain arises, creating much disturbance to the Patient, especially upon his going to stool, which he can hardly at all, at least but with great difficulty, discharge, till the Bone is replac'd.

In order to which, the Artift having oil'd his Finger, and sometimes two, for their easier admittance, must introduce them by the *Anus*, as, in searching for a Stone in the Bladder, is commonly practis'd; but with this difference, that as in this last he bears them forwards and inwards to the Bladder, for exploring the Stone contain'd therein, so in the first he thrusts them outwards and backwards, feeling the depress'd *Coccyx*, till there-

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by he has forc'd the same back again to its place; after which a *Defensative* must be apply'd, shap'd with a Point reaching the Verge of the *Anus*, and a loose T-Bandage of soft Cloth, made like a Belt to go round the Waste, with a Strap from behind, coming up between the Thighs, and fasten'd up thereto before: Then bleeding your Patient, and confining him to the Bed for some time, till the Symptoms of Pain and Inflammation are worn off, and that the Bone is again well settled into its place; when for some time it may be necessary for him, in sitting down, to have a Chair perforated, as usual for Children in their *Needings*, at least a soft Cushion hollow'd in the middle, for the ease of the *Coccyx*, or let the Patient in such Posture bear mostly on one Hip, shifting to the other, as he grows weary.

The only true Disjunction of this Bone that I HIST. 43 have met with, was in a Gentlewoman, who stepping hastily on a Marble-Pavement, where a Peascod-Shell happen'd to lie in the way, her Heels slip'd, and she fell with great force backward, with her *Crupper-Bone* against the Foot of a small Stool, tumbling over at the same time, which gave her such exquisite Pain, that there immediately ensued a fainting Fit: Out of which recovering, they went to raise her up, but she could not stand, without the same again returning; so that, calling in more Help, she was carried up to her Chamber, and put into her Bed; where, crying out of her Pain, by reason of its Situation, thro' an over Modesty, she neglected sending for proper Assistance; chusing rather to rely upon her Midwife's Counsel, who, coming to her, persuaded her she was only bruise'd, and bath'd the Part, according to her Judgment, with Brandy, after laying on a *Pultis* with some Herbs.

Yet

Yet, notwithstanding all her Endeavours, the poor Gentlewoman had no Ease, but complained of a perpetual needling to stool, which she could not get rid off, although several *Clysters* by the Midwife had been used, which either did not pass, or come forth quickly after, *re infecta*.

Thus languishing for about a Week in great Torment, I was at length sent for, and coming to examine the Part, perceiv'd a large *Echymosis* round about, the Swelling being much sunk, and going more narrowly to view the Appendage of the *Sacrum*, and lay my Fingers thereon, I found it depress'd or beat in, bearing hard against the *Rectum*: Wherefore, dipping my fore Finger in Oil, I gently introduced it by the *Anus*, where I presently met the Obstacle, and with the same pressing outwards, and attempting to raise up the broken *Coccyx*, as I found it give way, I still bore harder, till I had freed the Intestine from its Pressure, when, withdrawing my Finger, there follow'd a copious Dejection of the *Fæces*, together with some parts of the *Clysters* thrown up the Day before.

Afterwards, laying on a Plaister of equal parts *Defensive* and *ad Herniam*, I enjoin'd her to lie still and quiet, ordering her a laxative *Pysan*, ex *Decoct. Pect. cum Manna*, with a cooling *Regimen* in general, *Almond-Milks*, and *Emulsions of the Seeds*, *Panada*, *Water-Gruels* with *Currants*, and the like, I took my leave: But the next Day was again sent for, she finding the same Obstruction to the Passage of her Stool, as at the first, and entring my Finger, as before, I perceiv'd by the want of an early Reduction, the Point of the *Coccyx* fallen in again, as at first, which I could easily raise up; but found, on the removal of my Finger, it fell again, the external Part being entirely separate, and hanging as it were by its Cartilage on the inside

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side; so that it would play backwards and forwards, giving way to be rais'd up, and after, by its own weight as it were, for want of support, falling down again. For remedying this Misfortune, I contriv'd a Piece of *Cork*, like a *Pessus*, which I wrap'd up in Silk, and thrust up as a *Suppository*, and which indeed, during its stay, kept up the Tail of the *Coccyx*: But *Nature*, unus'd to such an extraneous Body, could not long bear it, before it stimulated the *Sphincter* to eject it; so that the poor Gentlewoman was forc'd to rest content, and at the time of her Stool very frequently necessitated, with her own Finger, to facilitate the *Exitus* thereof; the Part now, after many Years, still continuing moveable, as at the time I was first admitted to examine it: A necessary Caution for an early Enquiry into, and Redress of the like Disorders.

Fractures of the Patella or Knee-Pan.

THE next of the particular *Fractures* we shall take notice of, shall be that of the *Rotula*, call'd otherwise *Patella*, or the *Knee-Pan*, situate betwixt the lower *Apophysis* of the *Os Femoris*, or Bone of the Thigh, and the upper one of the *Tibia*, or larger of the Leg.

This Bone, tho' small and roundish, and withal one of the most solid of the *Skeleton*, being able to resist the smart stroke of the Hammer, is yet at sometimes broken, by a seemingly more inconsiderable Force, and that both *transverse*, *oblique*, and *length-ways* of the same, and requires truly as much Care in its Management, as any of the rest; since, by a neglect to keep the sever'd Parts conjoin'd, an incurable Lameness frequently ensues: The design of this Bone being for the more firm

firm Articulation of the Thigh and Leg, and securing the Extremities of these in their proper Places, more particularly in walking down a *Precipice*: And if the *fractur'd* Parts should happen to start or fly asunder upon their Reposition, a very great Debility must necessarily attend the Joint, whilst the intervening *Callus* may at some times impede the free Motion thereof, if not entirely stiffen the same, as we observed in our *Prognostic* of *Fractures*, befalling the Heads of the Bones.

The *Transverse* upon this account is more dangerous by far, than the *Longitudinal* or *Oblique*, being more difficult to bring the divided Parts together, as well as to keep them so after their Conjunction; the Muscles enveloping the Bone, as the excellent *Hildanus* has well observ'd, rather favouring the *Fracture* length-ways, whilst the Heads and Bellies thereof pull one way; that is upwards, and their tendinous Insertions below upon the *Tibia* downwards; whence, as the same Person descants, it will follow, that almost inevitable Lameness must ensue the same: Which Misfortune, however, I have known several to have escap'd, altho' many of them have been deprived of a compleat Flexion; and some, tho' walking well enough upon smooth Ground, yet have been at a loss in their going up and down Stairs, with their Feet interchang'd as before accusom'd. But, to the Cure, when you have got your Patient into his Bed, with his Leg moderately stretch'd out, it is to be held steady by your Assistants, the one above the Calf, or about the Gartering below Knee, with his Hands encompassing the Limb on each side, the other above in like manner, whilst you, having before examin'd the Condition thereof with your own, bring the broken

broken or separated Parts (betwixt which in the *transverse* kind, I have sometimes found so found a Cleft, as to let in two of my Fingers) close together, which is best effected by your Thumbs below, and your Fingers above, then putting your Plaister-bolsters, the one likewise at the top, the other at the bottom, close also to the outsidés of the broken Bone, you may lay on a couple of broad Straps of the *adhesive* Plaister, in the Form of a St. *Andrew's-Cross*, fastening the lower end a Finger's breadth or two beneath the said Plaister-Bolster, and, keeping your Finger thereupon, pull up gently the Skin at the same time, whilst, with those on the other Compress, you bear downwards, and fasten the other end of the Strap at the like distance there, proceeding cross-ways, as we said before, in the same manner with the second: Then laying on your *Defensive*, which must encompass the upper part at least of the Joint, if not surround it, next a couple of narrow Cloth-Bolsters, three or four times folded, dip'd in *Oxy-crate cum Alb. Ovor.* and, being express'd, plac'd also above and below, with one larger covering all; when with your double-headed *Bandage*, the middle part of which is before-hand placed under the Patient's Ham, you bring one end obliquely upward above-knee to the right, whilst the other in like manner is drawn to the left; and, taking hold of each with your Hands slid gently underneath, proceed as before below; thus decussating each, till the whole is taken up, unless that one turn or two thereof be spent in passing circularly, as well below as above the Joint; to the edges of which, for the farther security of this *Fracture*, I have sometimes caus'd four Tapes to be fasten'd, two to the upper, and as many to the lower, on each side of the *Patella*; then, bringing

bringing the same by a Tye near together, as in case of the *dry Suture*, so called, for *Wounds*, the two sides of the broken Bone are brought also nearer, and kept conjoin'd.

In the *longitudinal Fracture* of this Bone, the same *Apparatus* is to be got ready, only the *fractur'd* Parts being conjoin'd, by the Thumbs plac'd side-ways, as before above and below; the *Compresses* and *Bolsters*, as well of Plaister as Cloth, also apply'd after the same manner, *viz.* side-ways of the Joint, and the double-headed Roller manag'd, as we directed for other *Fractures* of those Parts, bringing one end one way, and the other opposite: But in room of this, after a few Days, I have sometimes made use of a lac'd *Knee-Piece*, by which I could streighten as I pleas'd, and by the help of the adhesive Straps, and Bolsters apply'd on each side, secure the *fractur'd* Parts in their places; still taking care, that, during the passing of the Roller, or lacing on of the said *Knee-Piece*, an Assistant keeps his Fingers close upon the Application, for securing Conjunction, shifting them as occasion requires, to make room for passing the *Bandage*.

Monfieur *Vaughion*, in the *longitudinal Fracture* of this Bone, directs this following:

‘ Take a Roller of three Ells long, and two
‘ Inches broad, roll'd up at each end, and ha-
‘ ving a Slit in the midst, to be apply'd on the
‘ middle of the *Fracture*: Then pass one of the
‘ Heads of your Roller through the said Slit in
‘ the middle, so that the said Slit be in the
‘ middle of the *Rotula*: Then draw the Roller
‘ pretty streight to keep the divided Parts toge-
‘ ther, and cover the Bone with several other
‘ Circumvolutions of the same, leaving small
‘ edgings all along; and lastly keep all steady

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by several circular Turns about the Juncture:
When this is finished, placing the Limb in the
Junks as usual.

But I think our own Method above propos'd,
full out as good as this, and less troublesome.

At the second Opening, which used not to be
with me 'till the Week's end, if the Dressings lay
snug and well adapted, the like Applications are
to be renew'd; unless, that, in the place of your
Defensatroe, some moderate *Cerate*, as was directed
in our Discourse of *Fractures* in general, be found
expedient, the Fluxion being taken off, for the
greater strengthening of the whole Joint; whilst,
upon these Occasions, you confine him strictly to
his Bed, for at least a Month: After which, the
Callus being fast, some lubricating Application may
be necessary, with which to anoint the Tendons
of the Ham, if not all round about.

Nor let it seem strange to you, that I have ta-
ken up so much of your time, in laying down
particular Directions for a *Fracture* of a Bone, to
appearance so inconsiderable; since, by the Mis-
fortunes of this kind, many a stout Man has
been made a Cripple, and many an upright Lady
forc'd after to halt, who in all likelihood had
come off better, with a broken Leg, if not a
Thigh: An instance of which, for its Singularity,
I will give you here, altho' I have not thought it
worth while to enlarge by a recital of Histories
of others, more common and less worthy notice.

A *Dyer's* Child, at that time aged about thir- Hist. 44²
teen, since a Woman grown, whether upon
opening or shutting a great Door, I have forgot,
but the same going Stiff, and too much for the
Strength of her Arms, she, as common at such
times, clap'd her Knee with some force thereto;
after which she complained of Pain, and limp'd

upon walking, but over-looking it sometime, at least contenting themselves with a *Family-Ointment*, the Swelling increasing, I was consulted, and found the Child crying out of great Pain, with a Contraction of the Tendons *sub Poplite*, and large Tumefaction all round the Joint, insomuch that she could not suffer the least Enquiry or Handling, without grievous Complaints and Disturbance; so that, going chiefly by the outward view, and perceiving the Figure thereof regular, I ordered for the present only an *anodyne Cataplasim* of the *Flor. Sambuc. cum Fol. Ros. in Lacte coct. ac Mica Panis inspissat*, embrocating first of all *cum Ol. Ros.* But, the Fluxion notwithstanding increasing with the Pain, an Inflammation appear'd, threatening an *Abscess*: To prevent which, when I had used my best Endeavours, by *Bleeding*, *spare Diet*, and *Emulsions* to contemperate the Heat, *Clysters* also to exonerate her Bowels, and derive the Humours another way, but ineffectually; suspecting Mischief now like to ensue, I desired some other Person might be advised with, and Mr. *Blundel* was sent for, who meeting me accordingly the next Day, and, viewing the Condition of the *Tumour*, was for hastening *Maturation*, with the *Pultis ex Ficibus ac Rad. Alb. cum Sem. Lin. Fenugr.* and the third Day after he came again, when we discover'd the *Tumour* lying high and prominent, on the inside of the *Patella*, under which the *Matter* now fluctuating, a piece of the *Velvet Caustic* was laid on, and the same Evening I cut into the *Eschar*, whence a large quantity of a laudable *Pus* discharg'd; upon which our Patient grew easier, and, by embrocating the *Ham, cum Ol. Lumbric.* the Tendons gave way, although by favouring the Limb, in a contracted

contracted Position thereof, that Leg was still considerably shorter than the sound.

The *Eschar* separating, we met again, and upon search discover'd the *Patella* bared of its membranous Enclosure, feeling as it were ragged, with large Sinuosity all round the Joint, whence great quantity of Matter was daily supplied; so that fearing the poor Child would sink under the same, and that, after all we could do, there would be hazard of leaving a *fistulous Ulcer*, we could make no other than a very dubious *Prognostic*: However, we first dilated upwards near three Inches on the *Vastus Internus*, which whilst we were digesting, as I was taking out the Dressings one Morning, I perceived the end of a Bone lie naked, on one side of the Wound, having thrust it self out, and so loose, that, lying only entangled in the Flesh, I could easily extract it with my *Forceps*: This I conceiv'd (not surmizing the same *fractur'd*) must be the whole Substance of the *Rotula*, or *Knee-pan*, separated from its Covering, the *Aponeuroses*, or tendinous Expansions of the four *Extensor* Muscles of the Thigh, here inveloping the same, before their Insertion on the upper Part of the *Tibia*.

But resolving to justify my farther Proceeding, I dress'd up again for the present, with my *Dossil* dip'd in warm *Liniment*, laid into the Wound, a large Pledget fac'd with the same externally; also a *Plaster-Compress* on each side of the Joint, gently to press forth the Matter, and prevent, as much as possible, any farther Sinuosity, or Mischief arising by Lodgment thereof; lastly the *Bandage* so order'd, as might better answer these Intentions.

The next Day, by Appointment, Mr. *Blundel* and Mr. *Salter* met me at the Patient's House, when taking out the Dressings, and perceiving the

loose Bone still farther advanc'd, in their Presence, and by their Approbation, I extracted the same, and, upon viewing the Shape and Substance thereof, we all concluded there had been a *Fracture* of the *Patella*, by which its upper part had been obliquely separated from the under remaining behind: A Case, I think, rarely met with; no Part of the Substance being divided throughout, but cleft as it were in two upon the Flat, the upper part, as aforesaid, rising and throwing off like an *Exfoliation*, leaving the remaining Piece behind, which never came in view, nor was discoverable by the Probe.

This done, we made a farther Examination, and found a *Sinus* opposite to the first, running downwards on the inside of the *Tibia*; but being of great Length, as well as Thickness, on the Junction, we resolv'd upon laying a bit of *Caustic* below, a little beneath the Place of the *Fontanel* here commonly made, and to endeavour that way to drain off the Matter, which accordingly, soon after the digesting out of the *Eschar*, answer'd our Expectation; the Discharge daily lessening, and the *Sinus*, by the help of *Compress* and *Bandage* uniting upwards to the Wound, from whence the shiver'd Bone had been drawn forth, which quickly after healed up: But there remaining a *Sinus* still below the place of this last *Caustic*, and the Matter having no vent by reason of its depending Position, otherwise than the same overflow'd; after I had tried a few Days successless to unite by *Compress*, I clap'd in my Probe-Scissars, and dilated about two Inches along the inside of the *Gastrocnemius*, and, putting hereby an end to this Discharge, heal'd it soon after by Incarnation: When, believing my Trouble all over, I left her for two or three Days, giving orders for lubricating the

Tendons.

Tendons in the Ham, with a *Litus ex Ung. Dialth. ac Ol. Lumbric. cum parte tertia Axung. Humanae*: Likewise to strengthen the Joint, and reduce the same into better Shape, which was still much tumefy'd; immoveable and contracted, I sent a Person to take measure, and fit her with a *Knee-Piece*: But whether by the irregular Management thereof, drawing it too streight at first, or from some other Mischief still undiscover'd at the bottom, her Pain increasing, I was sent for, and found her complaining of great Uneasiness on the outside of the Knee, insomuch that, unable to bear the lacing of the *Knee-Piece*, the same had been throw'n aside.

The Part looking somewhat inflamed, I order'd it presently to be anointed with *Ung. Sambuc.* and at Night laid on some White-Bread and Milk, boiled to a *Pultis*, and mixed up *cum Vitel. Ov. & pauculo Croci*: But notwithstanding, the Day following, I perceived the Pain with Tumour and Inflammation increasing, with a new *Phlegmon* here also like to ensue; which, finding a Necessity for so doing, I forwarded as the first with a *Suppurative Cataplasim*, and the Matter being made, which seemed to lie deeper than that of the former *Abscess*, I laid on a *Caustic* somewhat stronger, *ex Lapide Infernali*, and the same Day let it out in great quantity from the perforated *Eschar*, after which she had a good Night.

The next I met Mr. *Blundel*, as every Day afterwards for near three Weeks, and making a new Enquiry by the Probe, as well as Examination otherways by our Hands, we perceived by the Looseness of the Joint, that the *Matter* had work'd itself quite through, the Instrument passing, from the *Ulcer* above, downwards towards the Ham, where feeling underneath, tho' at some di-

stance, it was yet perceptible: A Misfortune truly of the highest Consequence, admitting no farther Dilitation, threatening, if not *Cariosity* of the Bones of the Joint, however an incurable *Fistula*, and by the continued Discharge, a *Marasmus* with a *hectic Fever*, which had already seized upon her; and for which, by the Direction of Dr. *How*, her Physician, she was put into a Course of the *Testacea*, or absorbent Powders, with the *Asses Milk*; and having try'd, by suitable Compress and good Rolling, to press forth the *Matter*, and unite the Cavity, but without answering our Expectation; giving also a *medicated Aq. Calcis* to sweeten the Juices, and help forward the Work of healing, I propos'd, in a Case growing daily more deplorable, the passing a large Needle thro' a *Cannula* contriv'd for the Purpose, carrying a *Flammula* along with it, and that way invite the *Matter* to take its Course by a Vent commodious for its Discharge: To which Mr. *Blundel* (a Person, I think, thro' native Temperament, more timorous, in many of these Cases, than most others of so sound a Judgment) oppos'd the Danger of those *nervous* and *tendinous* Parts lying in our way, and likely to be hurt in the Operation. At length, however, finding we should lose our Patient, if somewhat of this nature was not attempted, he gave way, after we had try'd, by choaking up the Matter at the top, to force it upon taking its Course downwards, and raising a new *Abscess* more convenient for emptying itself thereby; but all in vain, the Symptoms of *Fever*, *Pain*, and *Restlessness* increasing, and the *Matter*, in spite of all Endeavours, still bursting through at the top: So that coming one Morning, with the Instruments I had order'd to be made, I passed down the *Cannula*, the Extremity of which in the Ham, by bearing somewhat hard from above against the same, I could plainly perceive on

one side of the *Tendons* therein terminating; then entring the arm'd Needle, I forc'd its Point thro' the outward Teguments, between the said *Flexor Tendons* of the Thigh, which drawing forth, and presently after extracting also the *Cannula* by the same way it had enter'd, I left the *Flammula* tied with two pieces of narrow Ribbon at each end, and making a single Bow-Knot, on the outside, which was daily mov'd in the Wound, first smear'd with my *Digestive*.

But notwithstanding this, such was the Intricacy of the *Sinus*, that the *Matter* for several Days still issued by the upper Orifice, and I began to be doubtful whether or no our Contrivance would turn to an account, 'till observing the lower so much fill'd and distended by the said Silk or *Flammula*, as to interrupt the Exit of the said *Matter* thereby; when I had well digested the Wound, I pass'd up a small thin piece of *Gentian* between the Silk, and thereby, gradually ampliating the Orifice, found, after few Days thus proceeding, that, upon extracting the said *Gentian* with my *Forceps*, several Ounces of *Matter* at length pour'd out, having made its way as was desir'd: Hence, finding sufficient room, I discontinued the use of the Tent, and left the *Flammula* by itself, thinking it no longer needful, thus to choak in the *Matter* betwixt the times of Dressing, but rather to promote its constant passing off. And, truly from this time, our Work went prosperously on, the Passage from above, being wholly cut off, and, that by the lower Orifice daily lessening, our Patient growing also easy; so that after about a Month's time from the *Seton* we had so little, that I cut it out, suffering both Orifices to shut up, and put her on a *Knee-Piece*, that I saw well fitted and laced on myself, and which she wore now with good Advantage.

The Joint, as was to be expected, continued stiff and much contracted, so that the Limb was thereby shorten'd near three Inches: To remedy this Defect, she had a Shoe with a high Heel, by which, and the Help of Crutches, she made a shift to go about the House: And we were both of Opinion, that her Cure being confirm'd by a little longer time, her Flesh and Strength also recruited, so as that she might be able to perform it, she should make a Journey to the *Bath*, which she did accordingly, with so great Advantage, as to return, after about two Month's time, plump, fleshy, and with a good Complexion, the Tendons relaxing also the other half of the former Contraction, which gave her Friends so great Encouragement, as to send her thither the next Season, with a still greater Benefit: So agreeable are those Waters in their *balsamic* Properties, and kindly Warmth, to the *nervous Compages*, especially assisted by a youthful Subject, that she now walks very tolerably, by the help only of a Crutch-Head Cane.

By this Example we may see how small an Accident did here sever this hard and solid little Bone, the one Part from the other, giving rise to a Train of unhappy Accidents, which had nearly prov'd fatal to the unfortunate Sufferer.

Having gone thro' the *Trunk* and larger *Limbs*, it remains that we speak a few Words of the *Fractures* of the Bones of the *Hands* and *Feet*.

FRACTURES of the Bones of the Hands and Feet.

Fracture of the Bones of the Hands and Feet. The Bones of the *Carpus* and *Tarsus*, with the *Metacarp* and *Metatars*, being small, and, having more Solidity in proportion than some of the rest, are more

more liable to be displaced than broken, unless by some violent Force and great Weight falling upon, and crushing them to pieces: Which happening, you are to endeavour, by moderate Extension both above and below, that is, at the Wrist and Fingers, or at the Ankle and Toes, to set them carefully to rights, raising up those Parts which are depress'd, and sinking down the prominent, comparing always the sound Hand and Foot with the diseas'd, for your better Guide and Direction: Then laying on your *Defensative*, with suitable *Compress* of Plaister, upon the Parts requiring them, or such as are most likely to fly out again; over which your *Bolsters* of Cloth, dip'd and express'd from the *Acet. Vin. & Alb. Ovor.* Lastly, such *Bandage* as may both secure the Reduction, and avert the Fluxion of Humour, to which the Hurts among these tendinous Parts are very liable, and which truly require a strict *Regimen*, with as great Abstinence, to obviate the Symptoms of *Fever, Inflammation* and *Apostemation*, as those of the greater Bones of the larger Limbs.

IN these *Fractures* there is no room for *Splints*, instead of which, *Bolsters* of Cloth, as aforesaid, shap'd to the Parts, are to be soak'd in *Oxyerate cum Alb. Ovor.* and, being wrung out, to be laid both on the in as well as outside of the Part, afterwards carefully rolled on: Besides which, for the better stay and support, a *Ferula* of Wood or Tin quilted, or of Pastboard, dip'd and cut suitably, may be contriv'd and fasten'd to the Palm of the Hand, as well as Soal of the Foot, which, by keeping the same out flat, may prevent the rising or starting up of the broken Parts from their proper Places.

FRACTURES of the Fingers and Toes.

Of the
Fingers
and Toes.

IN the *Fractures* of the *Fingers* and *Toes*, having made a due *Extension*, and reduced the *Bones*, you are to surround them with your *Defensaire* and *Roller*, of suitable *Length* and *Breadth*, as in the larger we have directed, placing also a couple of thin *Splints* of *Paper* pasted, on each side of the *Finger*, and, resting the *Hand* in a *Scarfe* or *Napkin*; or, if the *Toe*, confining your *Patient* to his *Bed* or *Couch*.



S E C T IX.

Of DISLOCATIONS.

Osteology
absolutely
necessary to
the reducing
as well
of Frac-
tures as
Dislocati-
ons, with
a Persua-
sive to the
Study
thereof.

AS, at the Close of the *Fourth Section*, concerning *Wounds in general*, we earnestly exhorted the younger *Practitioners* of this *Art*, to the Study of *Anatomy*, or so far to acquaint themselves with the *Fabrick* of the *Muscles*, and their *tendinous Origin* and *Termination*, together with the *Course* of the *Blood-Vessels*, and larger *Plexus*, or *Distribution* of the *Nerves*, that they might thereby be able to foresee their *Danger* in performing any *chirurgical Operation*, and consequently so far as possible avoid the same: So, I think, I cannot better begin this, than by pressing their strict Acquaintance with the *Osteology*, or Knowledge of the *Skeleton*; so far especially as concerns the outward *Frame* thereof, which is alike needful

needful for him who goes about to set a broken Bone, as well as one that is out of Joint : For as the *Muscles*, or fleshy Parts of our Bodies, by the stupendous Artifice of the Great Author of Beings, are *geometrically* both formed and placed thereon, as so many *Vestes* or *Levers* on their *Fulcra*; so are these last, I mean the *Bones*, by the same *Supream Architect*, in their Conjunctions so adapted thereunto, as, together with the help of the *nervous Fluid*, at the meer *Nutur Animæ*, may mutually best answer the Ends of *Station*, *Session*, and *Progression* of the whole, together with the *Flexion*, *Extension* and *Circumrotation* of the several Parts, without which our Bodies would have been incapable as well of *liberal* as *mechanic Arts*, however our Minds had been susceptible of *Invention*.

Columbus indeed tells us of a *Skeleton* he had presented him by a Physician, in which from Head to Foot there was no *Articulation*, but one continued ossify'd *Compages*; that the Donor, *Joannes Bertomius*, had seen the Person when alive at *Rome*, who was an old Man, and that he could only move his *Eyes*, *Tongue*, *Penis*, *Thorax*, and *Abdomen*, all other Parts of his Body being incapable of Motion.

Dr. Conner gives us such another Account to the R. S. of a *Skeleton* he had seen in *France*; for here, besides an *Anchylosis* found on the Joints of the Limbs, the Articulation of those in the Trunk were so effaced, that they really made but one continued Bone. See the *Phil. Transact. Abridg'd*, Vol. III. p. 293.

But these Instances are exceeding rare: Proceeding then to our Task; How, I pray you, Gentlemen, is it likely that any one should well reduce a *fractur'd* or broken Bone, who is unacquainted

HIST. 45.
A Skeleton
without
Junctures.

HIST. 46.

acquainted with the natural or proper Make, and Site thereof; before it happen'd to be so sever'd; its *Bearings* and *Bowings* towards the middle, with its *Apophyses* and *Epiphyses* at each Extream? Whether one or more Bones, of what Make, and in what they differ (which I have known some so unskilful as to be unacquainted with) make up the stable Part of the Limb?

Again, How meanly qualified for replacing a disjointed one, must he be, who knows as little of the several ways of their *Articulation*, or the Conjunction of their said Extremities?

'Tis true, but I think not for the Honour of our Legislature, we want not those who are thus ignorant; and yet take upon them the Office of *Bone-setting*. The *Plough-jobber* in the Country, and the *Porter* here in Town, have been notorious enough for their Exploits of this kind: And the many *strumous*, apostemated Joints, with *Caries* of the Bones, or other rigid, stiff, and distorted Members; constantly presented by the poor Cripple to you for Advice; when 'tis too late; do sufficiently testify, what sort of Cures these People have perform'd.

But, to the better Understanding this part of your Duty, while we leave this vile set of Men to the Sting of their own Consciences here, and the Divine Vengeance hereafter, you must consider, that there are two general Ways of the Bones *Conjunction*, the one for a *manifest* Motion, the other more *obscure*, and sometimes none at all.

The several
Kinds of
Articulation.

The former is termed *Diarthrofis*, which is subdivided into three Degrees, viz. *Enarthrosis*, *Arthrodia*, *Ginglymus*, which we shall observe to you, in making mention of the particular *Dislocations*; the latter *Synarthrosis*, also *Symphisis*, of which too there

there are sundry Kinds, as well with as without an *intermediate* Substance, and from the Nature of which are derived their *Greek* and *Latin* Appellatives.

Thus, where there is only a strait Line, it is called *Harmonia*; where there is Indenture, *Raphe*, also *Sutura*; where one Bone is fix'd in another, as a Peg or Pin in a Hole made for that purpose, *Gomphosis*; if fasten'd by Flesh, *Syssarcosis*; by a Ligament, *Synneurosis*; by a Cartilage, *Synchondrosis*; by a Tendon, *Syntenosis*; and by a Membrane, *Sinemensis*; of which also hereafter, when we come to the several Bones by these means articulated.

But farther, before you set upon any Enter-Apparatus prize of this nature, it is necessary you should be ^{for Dislo-} provided of your Applications, and other Parts ^{cations.} of your *Apparatus*; such are your *defensative Emplaster*, the same as for the *Fracture*, large enough to encompass the Joint, to whose Flexure and Make it must be handsomely fitted, by notching with your Scissars: Your *Cloth-Bolsters* dip'd in *Pesca*, or the *Oxycrate cum Alb. Ov.* also a *double* or *single-headed Roller*, as may be requir'd, of much greater length, especially if for the Shoulder and Hip, than was wanting for the *Fractures* either of the Arm or Thigh, because of the Circumvolutions to be therewith taken round the Trunk of the Body, for the better security of the Bones, upon their Reduction: Lastly, your *Assistants*, as well by their Strength as Judgment too, (where they can be had) well qualified for the Work: Or, these failing, suitable *Instruments*, for the same; of which the Antients have provided some, and which modern Improvements have made farther useful.

A late

A late eminent Practitioner once told me, that he had never met with any *Dislocation* that required a *Machine* or *Instrument*, or which was not reducible by the *Hand*, artfully manag'd.

I must own, I have sometimes come after the *Instrument*, and succeeded by the *Hand*; but whether or no the *Instrument* had been rightly order'd, (without which meer Force may do more harm than good) might possibly admit Dispute: But, doubtless, there are many stubborn *Luxations*, both of the *Os Humeri* and *Femoris*, in rigid, dry, and tough, muscular Bodies, which at sometimes call for greater Strength, than can be exerted by the simple Extension of the *Hand*, (without an *Instrument*) how artfully soever directed.

'Tis very certain that some of them are, in a manner wholly perform'd by *Art*, with but little Strength: But others want great Force, as well as Dexterity, to assist by a strong Extension of the Limb. Nor must we forget to take notice of the *Counter-Stretch*, at least so far as may secure a Steadfastness in the Parts above, whilst you are pulling those below, without which the latter will be little effectual to accomplish the Work. And this briefly concerning *Dislocations in general*; from whence we shall come to those of the *particular Bones*, wherein we are more directly to apply what we have now deliver'd in general Terms.

Dislocation of the Bones of the Cranium.

Dislocation of the Bones of the Cranium.

AND first of the *Dislocations* incident to the Bones of the *Skull*, whose upper and backward Parts are conjoin'd by that Species of *Synarthrosis*, call'd *Sutura*, as are those of the fore-part, viz. the upper Jaw and Nose, by the *Harmonia*.

To

To the *Skull* likewise, in some sort, appertains the lower *Mandible*, to which, borrowing a *Vertebra* from the Neck adjoining, we may, I think, give Instances of almost all kinds of *Articulation* before enumerated, whether for *manifest* or *obscure* Motion.

Thus, as we have just now observ'd, in the upper and hind Part you have the *Sutura*; in the fore part *Harmonia*; in the same Part likewise of the lower Jaw, before the same is ossify'd, as in Infants, *Synchondrosis*; in the Teeth therein fasten'd, both *Gomphosis* and *Syssarcofis*; in the Jointing of the *Front* and *Sinciput* likewise in Infants, the *Synimensis*; these all under the *Synaribrosis*.

In the hindmost Process of the lower *Mandible*, joining in the *Sinus* of the *Os Petrosum*, an *Artro-dia*; in that of the foremost, receiving the Tendon of the *Musculus Temporalis*, under the *Os Jugale*, a *Syntenosis*; in the said *Jugal* Bone, with that making the *Orbit*, a *Sutura* also; and lastly, in the upper *Vertebra* before observ'd, with the great *Foramen*, at the Base of the *Occiput*, a *Ginglimus*; these, all but the *Os Jugale*, under *Diaribrosis*.

Now the greater part however of these Conjunctions, belonging properly to the *Cranium*, being without Motion, and seldom liable to *Dislocations* without a *Fracture*, of which in our last *Section*, we intend to quit such of them at this time, and to touch only upon those of the lower Jaw, which has a manifest Motion, and is more liable to be displaced.

We have already inculcated, that before you pretend to any of these *Operations*, or to go about the Reduction of a Bone out of the Place, you are thorowly to acquaint yourself with the Nature and Condition of the same Bone in its Place, and the several

veral Ways it happens to slip out thereof, that you may the more readily go about the Work.

DISLOCATION of the Jaw-Bone.

Of the lower
Mandible.

By this Examination and Enquiry you will find, that we are now speaking of, I mean the *lower Mandible*, or Jaw, has at each end, where it articulates with the *Os Petrosum*, two *Processes*; the one more sharp or pointed, called *Corona*, which, as before remark'd, entering under the *Os Jugale*, or Cheek-Bone, receives the Tendon of the *Crotophites*, or *Musculus Temporalis*, whose Motion it obeys in lifting up the Jaw, and shutting of the Mouth; the other Process behind has a longish Neck, but flattish Head, and is named *Condylus*, by which, being covered with a *Cartilage*, as are all the other Articulations of this kind, it enters a *Sinus*, or Hollow, excavated for that purpose, in the lower part of the *Petrosum*, or *Temporale*, and is connected also by a membranous Ligament; which said Conjunction is, we told you, an *Arthrodia*, under *Diarthrosis*, or that for a manifest Motion.

But by this Situation it sometimes happens, especially in Gaping, Yawning, or thrusting any large Body, as an Apple, Pear, Plumb, into the Mouth; as also in Gaggings, as they call it; by which the fore Teeth are much depressed, the Process, we called *Condylus*, slips out of its *Sinus* forwards under the *Jugal Bone*; it being scarce possible, without a *Fracture*, that it should be luxated any other way, so well defended by those about it.

I cannot pass by the Remark made by a Foreigner, upon this Subject, as if somewhat wonderful was contained therein.

Mr.

Mr. Raw, saith he, of *Amsterdam*, in his *Osteological Demonstrations*, has made an excellent Discovery of the true Seat of the Articulation of the lower Jaw-Bone, with the upper, in a *Skeleton*; for this hath been a constant Error in all of them, as well as natural Draughts of the same; the lower Jaw-Bone seeming to be articulated in that place, where the *Chynoid* Cavity meets with the inside of the Bones of the *Temples*, great part of which, in a living Subject, is almost always replete with Fat, and the Space gives way, or yields to the uniting *Apophyses*; but in Motion especially, viz. that the lower Jaw-Bone might move backward without impediment: But the true Place of this Articulation, says he, is near the *zygomatic Process*, or *Jugal Bone* about the *Temples*, in a transverse Eminency, to which, the Cartilage intervening, we may plainly see the lower Jaw-Bone articulated; but if, from a Fall or other Accident, the same be disjointed, then it may be, that almost all the *Condylode*, or united Process, sinks into the *Chynoid* Cavity; which happens only in a præter-natural State, when the Patient is hindered from chewing, till, by the Assistance of a dextrous Surgeon, the lower Jaw-Bone be stretched out, and reduced to its former place.' But proceeding,

This *Dislocation* happens sometimes on both sides, at others on one only: If slip'd out on both, you will find the Jaw hanging down to the Breast, with the fore Teeth standing out beyond those in the upper; the Patient being unable to shut his Mouth, or to speak articulately, as at other times: There appears also a Streightness on the *Temples*, from the Stretch of the *Muscles*, viz.

Dislocation of the Jaw-Bone. Sect. IX.

viz. the *Temporal*, and their Tendons, which occasions Pain, and a Rigidity of the said Parts.

But if one side only be *luxated*, the Mouth appears distorted, standing as it were across, so that, even by this Deformity, it is often conspicuous at the first sight, especially where no Convulsion has preceded; that Part also being thrust forwarder than its opposite, hanging downwards, nor can the Patient bring his Teeth to meet, or, if he could, will they stand direct, as formerly, against each other.

In both Cases, 'tis usual farthermore to have the Mouth filled with Spittle, from a Compression of the *Glands*, in this Position of the Jaw, which separate the *salivary Juice*.

The Manner of reducing this *Luxation*, when both the *Condyls* are thrown out, is by placing your Thumbs on each side, far back within the Mouth, upon the *Dentes Molares*, or Grinders, so called, the Patient being on a low Seat before you, with your Hands and Fingers on the outside of each Jaw, whilst your Assistant stands behind to hold the Head steady, with another before to keep quiet his Hands; then pressing downwards with your Thumbs so placed, at the same time you are to raise the fore-part of the Jaw to its opposite, the upper, and you shall frequently hear the *Condyls* (if the Work be rightly managed) snap into their Places.

The like, if only one of them be displaced, when you are to make the Pressure on the same side, as also the Elevation; in which you are to draw more to the one, till the Teeth stand even, and that the Patient is able to shut his Mouth as before.

There is a Method recommended by some as effectual, when the *Dislocation* happens on one side

side, which is a *good Slap on the Cheeks*: But, waving this, as a very *empirical* and rude Treatment, I think the less rustick Usage, or more careful, more likely also to be successful.

The same Author proposes a couple of little Pieces of Wood, in the form of small Wedges, whose thinner ends he places on the backward Teeth, as before directed for the Thumbs, with a Girth or Strap under the Chin, and thus whilst, your Assistant, with his Knees upon the Patient's Shoulders, draws up the Girth, you are to thrust down the Wedges upon the Teeth, and bring the *dislocated* Jaw into its Place: But the way by your Thumbs on the inside, and your Hands assisting underneath on the out, I think the surest Method; which are, however, to be defended by strong Gloves, or Rags wrapt round them, from the Patient's biting you unawares, as the Chin rises, and the Heads of the Bone fall back into their Sockets.

A poor Woman merely by the Force of *Yawn- Hist. 47?*
ing, as she lay in Bed, thus displaced both *Condyls* of the *Maxilla*, and knowing not the Meaning thereof, sent for her Neighbours; to whom, as well as she could, she related her Case, which was in a very abrupt Manner: Upon which they concluded diversly of the same, some saying it was a *Convulsion*, others would have her *Plumet-struck*, with other like foolish Conceits.

They had called up several, pretending to Surgery, living near her, who either knew not what ailed her, or at least which way to help her: At length putting on her Cloaths, she was brought into the City, and recommended to a Person of more Judgment, who notwithstanding, after some unsuccessful (doubtless because inmethodical or inartificial)

inartificial). Attempts, gave her a Curse, and turned her out of his Surgery.

Coming hence, and despairing of Relief, in this Jaw-fallen, flavering Condition, upon her Return she was brought to me, who, viewing the Nature of the *Luxation*, set her down on the Ground, and, having arm'd my Thumbs as aforesaid, giving charge to one behind to keep her Head firm, whilst I clapped each of them behind on the backward Teeth, with my Hands on the outside for my farther Help therein, as I therewith somewhat strongly depress'd them, and with my Palms and Fingers raised up, almost at the same instant, the fore-part of the Jaw, the *Processes* on each side very audibly snapped into their Places, the Jaws meeting with the Teeth, direct as before against each other, and so continuing of themselves.

After this, I applied a *Defensive* reaching from one Ear to the other, with a Muffler, as we directed for the *Fracture* of the same Bone: Giving strict Direction, that her Nourishment consisted of *Potables* and Spoon-Meats, at least that she avoided all things requiring *Mastication*, or wide opening of her Mouth, more especially at the times of *Yawning*, to which she was much subject, moderating that Action all she could, and to turn her Head aside from those whose Jaws she happened to see thus occupy'd.

Of the T E E T H displac'd.

Of the Teeth displac'd, IN the *Mandibles*, or Jaws, as well the upper as the lower, are fix'd the *Teeth*, as a Nail drove into a piece of Wood, which, I think, is the single Instance of that Articulation we call *Gomphosis*.

sis, being farther secured also in their *Alveoli*, or Sockets, by the Gums, which we call'd a *Syffarcofis*, of which also before.

The *Dislocation* of these Bones is usually voluntary, by way of Extraction with the *Paces*, *Pulicans*, or *Punce*, for relieving the cruel Pains they occasion, when cariated, or otherwise attended by Fluxion of Humour: But sometimes accidental, as by Falls and Blows; at which times, if they are only loosened in their Sockets, or if turned as it were half out, and hanging in a manner loose by the Gums, yet, being immediately clapp'd down into their Places, they will frequently resetttle, and grow fast as before the Accident.

I remember when, by the Kick of a Horse, a Hist. 48. young Girl had the lower Jaw-Bone *Fractur'd*, there were likewise four of her Fore-Teeth displaced, one of which was lost, the other hanging with the points of the Fangs upwards, by a Portion of the Gums.

She having shed her Teeth not long before, and there being now but little likelihood of a new Set to succeed, I was the rather willing to try the Experiment, and, if possible, prevent the Deformity, that must ensue so great a *Gbasm* left in view: Upon which, before I enterprized the Reduction of the *Fracture*, comparing the sides of the *dislocated Teeth* with their said *Alveoli*, and trying how they best fitted, washing her Mouth with a little warm Claret, and cleansing away the Blood, I entered them in their several Stations, and closed the lacerated Gums about them with my Fingers: Then reducing the *Fractur'd Mandible*, according to the manner I have discoursed in the last *Section*, I directed a *Gingilavium*, or Mouth-Water, to be used as a *Gargle* for these Parts, prepared of the Decoction of the *Eol. Plantag.*

Of the **TEETH** displac'd. Sect. IX.

Equiset. Fol. Ros. Flor. Balaust. Cort. Querc. Gum. Massick. in part. æq. Aq. Fabr. & Vini Lubri austeri, adding, to a Pint of the Colature, *Mel Ros. & Syr. è Ros. Sic. ʒ ʒj.*

And thus, whilst the broken Bone was uniting, she suck'd her Nourishment through a Spout, passing in at one Corner of her Mouth; so that, by the time the *Callus* was grown fast, she found her Teeth were so too, tho' it was a long time before she could eat upon them, and they afterwards felt numb'd, as might be expected from the tearing the Nerves off from their Extremities, by the force at first displacing of them.

LUXATION of the *Vertebræ*.

Of the
Vertebræ
of the
Neck,
Breast and
Loins.

THE *Vertebræ* of the Neck, especially the upper, are likewise subject to these Misfortunes, tho' less frequently than other Bones.

These *Vertebræ*, together with the *Spondils* of the *Thorax*, and indeed of the whole *Spine*, or Back-Bone, are the most eminent Instances of that Conjunction we call *Gynghimus*, that is, when the same Bone receiveth and is received of another: Thus the descending, oblique Processes of each *Vertebræ*, receive successively the ascending ones of those below them.

The first of them is *metaphorically* call'd *Atlas*, whom the Poets feign supports the greater Globe, the World, on his Shoulders, as this little one, the Head, is upon this Bone, which in its upper part has two Cavities, articulating by an *Artro-dia*, with as many Prominences at the Base of the *Occiput*.

The second is called *Epistropheus*, also *Cardo*, the Hinge, for that, by means of its *Dentiform*, or Tooth-like Process, entering a *Foramen* in that
above

above, the Head is turned about as a Door upon its Hinge.

And when, by some outward force, as Falls from on high, pitching especially obliquely on the *Vertex*, this Process is thrown out of its Place, the Neck, in the common Phrase, is said to be *broken*, when, if Relief be not had upon the Spot, the Patient most commonly dies immediately after; as in like manner it falls out, if any of the other happen by like Violence to be distorted, the Face looks black, standing towards one side rather than right forwards; he breaths with difficulty, falters in his Speech, and, if the *Luxation* be compleat, by the Compression thereby made on the *Medulla*, *Paralysis*, *Convulsion*, *Cold Sweats* and *Death* soon terminate the Patient's Life: And, to speak the Truth, in the reducing of these *Luxations*, we are somewhat in the dark, by reason of the intricate Structure of the Parts, *viz.* the Intermixture of the oblique *Processes*, receiving and being received again of each other, or the hazard of their Coaptation in their proper or natural Situation.

But it is not often, that we have occasion to try our Skill, the By-standers with those nearest at hand, being usually the Operators.

The Method however proposed, is to lay the Patient along upon his Back, whilst the Artist sits behind, with his Feet upon each of his Shoulders, then taking hold of his Head, with his Hands on each side about his Ears, whilst he thrusts down the Shoulders with his Feet, he pulls the Head to him, drawing more especially from that Part to which it inclined, till, by the best Comparison he can make, of its direct Figure and due Connexion, he hath settled the distorted or dislocated *Vertebrae* in its Place.

Another way, is to set him upon a low Seat, and, whilst the Assistant lays his Hands upon his Shoulders, to keep them down, the Artist regularly lifts up his Head, passing it to or from him, as the nature of the Case shall require; or perhaps side-ways, till the Bone is settled therein.

By this it will plainly appear, that no one unacquainted with the *Compages* of the Bones, or the Frame of the humane *Skeleton*, is likely to succeed either in the present, or any other the like Accidents happening to that Structure: Since it is found at sometimes a very difficult Task, for one, who is very conversant therewith, to accomplish his End therein.

These *Vertebrae* of the Neck and Breast are little differing from each other, the first wanting a *spinal Process*, which, as some *Anatomists* remark, would have offended those two small Muscles of the Head, called the *Obliqui Inferiores*, in the bending the same forwards.

The five next have theirs divided into two, for the more commodious Insertion of the Ligaments that connect them: The transverse ones are also shorter than those under them, and their Perforations smaller, each growing still larger than that above it, till you come to the seventh, reckoning from the upper, which has only a single *spinal Process*, like those below; where there is still this farther Alteration, that the transverse ones have each a little *Sinus* or Dent, with which they embrace the larger Tubercle of the Ribs, whose other Extremity is fastened by a *Synchondrosis*, to the Edge of the *Sternum*.

Their four oblique *Processes* we have mention'd before, which, inosculating each other, form a *Ginglimus*, or mutual Conjunction: On their inside, or fore-part, they jet out a little, and on the outer,

or

or backside, are somewhat concave; having on each of their sides forward a small Pit also, or Impression, exculp'd for the lesser Tubercle of each *Costa*, whose greater, as we said before, were joined to the transverse *Process*.

As to their *Foramina*, the large one in the middle, is well enough known to be for the Reception of the *Pitb* or *spinal* Marrow, besides which, as they join each other on their sides, there is a Passage for the going forth of the several Pairs of Nerves, and the entrance in of the Blood-Vessels, both Veins and Arteries.

To come now to their Number, there are usually reckoned seven to the Neck, twelve to the Breast, five to the Loins, five or six to the *Sacrum*, tho' ossify'd in a manner into one by Age, and four or five to the *Coccyx*, terminating the same, like a Tale turning inwards, and called vulgarly the *Crupper*, or Rump.

Now the Conjunction of these Bones, by their several *Synchondroses*, being very close and compact, their Motion necessarily must be but very obscure, unless those of the Loins, whose looser Connection renders them better able to bend, and again raise up the Trunk above them; and these are the largest of all the rest, still gradually encreasing till you come to the *Sacrum*, with which the lowest joins; the backward Spines of these are likewise shorter than those above, and turned somewhat upwards, their Jointing also being different: For as our Author, Dr. *Gibson*, well observes, as in those of the *Thorax*, the upper oblique *Processes* were knobby, and the lower hollow to receive them: In these there is the reverse, the upper being hollow, and the lower protuberating, unless it be the last of the *Thorax*, which has both its ascending and descending oblique *Process* excavated, to receive

ceive the heads of the *Processes* of the last but one of the *Thorax*, and the first of the *Loins*.

And thus having given you a Sketch of the whole *spinal Compages*, whose use is for the Passage of that Production of the Brain, which from this Part is here called *Medulla Spinalis*, whence by certain *Tubuli*, or small Pipes, the *Fluidum Nervosum*, or *Sensitivum quid*, is convey'd to the Trunk and Limbs, the use of which being so noble and excellent, it will easily follow, that as in hurts of the Brain it self, the Fountain-Head, there commonly ensue the most formidable Symptoms; so here likewise, if the *Vertebrae* happen to be suddenly distorted, much more entirely *luxated*, the *second Brain*, as we may call it, being compress'd, the Dispence of the said Fluid, or *vital Energy*, must be intercepted, and consequently *Paralysis*, *Convulsion*, with a total Eclipse of the animal Faculties, come on presently after.

This, I say, premis'd, I shall farther inform you, that, when the Accident befalls those of the Neck, the Sick generally looses the use of one or both his Arms, as one or both sides of the spinal Marrow happen to be affected; when those of the Loins, the Legs in like manner: And, if the Compression be very great, his Urine comes away involuntarily, and there follows a general Relaxation of all the Nerves below.

In order to the remedying of these Accidents, where there is a Prospect thereby of saving the Patient, the Operation must immediately be set about, as above directed, making suitable Extension by the Head; and pressing down the Shoulders.

In those of the Back and Loins, the Patient being laid prone upon the Table, the Extension is

begun

begun by two strong Men at each Armpit, whilst two others are making a Counter-Extension at the Hips, and the Artist, seeing a fit time for his purpose, forceth the distorted *Spondil* into its Place.

This simple Extension by the Hand failing, the Antients have propos'd the same to be made with *Pullies*, and accordingly contriv'd several *Machines*, or *Instruments* for that purpose, which are to be met with in some of their Works, delineated in Sculpture; among which, particularly those of *Ambrose Parey*, who farther adviseth, (as Monsieur *Vaubion* also takes notice, in his *Chirurgical Operations*) whilst Extension is making, to wrap a couple of Sticks in Cloth, and to lay them on each side of the *Spine*, as the Patient lies along upon his Face, which must be so thick as to prevent any harm to the *Spinal Processes*: This done, you take a Rolling-Pin, and with both Hands strongly force down the two pieces of Wood, till the same, bearing against the distorted *Vertebrae*, drives it in betwixt its fellows.

But this is only practicable in the Distortion outwards, and then too, I fear, but rarely with any Advantage.

When the *Spondil* is depress'd, or beat inwards, the Case, if possible, is still worse, and the Patient, languishing under some of the Symptoms aforesaid, soon after dies: Though here also our *Theorists* talk of another Experiment, which is, by making Incision upon the Place, and putting the Trunk of the Body, as before, upon a stretch, to take hold of the *Spinal Process* with a Pair of *Forceps*, and lift up the *Vertebrae*, that it may lie even with the rest.

But,

Dislocation of the Vertebrae. Sect. IX.

But, I fear, I have already made too long a Digression, about an Operation so easily talk'd of, but difficultly, and, I think, rarely put in practice; or, if practis'd, so little likelihood of Success to attend it.

There is, however, another sort of these *Distortions*, I must just mention to you, I mean those which are made gradually by a *Congestion* of Humour, loosening the *Compage* of these Joints; and, after protuberating, they occasion those *bunch'd* or *crooked Backs* we often meet withal; especially among weakly Children, and such we call *Ricketty*: Though I have known the same Misfortune to follow after a Fit of Sickness, by way of *Metastasis*, or Translation, as also from Blows and Falls, when some time after the *Vertebrae* have born outwards; and sometimes one of the *Scapulas* behind, or the Breast-Bone rising before, makes an acute Angle with the sides; by which the Cavity of the *Thorax* being streightened, and the *Lungs* not having their free play, the Patient becomes *anbelous*, or *asthmatic*, and very rarely sees length of Days, at best spins them out with great toil and labour upon this account.

Nor are we here wanting of *Pretenders* to the Cure of these *Distortions*, though the Performance has rarely, I think, if ever, answer'd the Pretence or Promise.

Galybeats and *Hepatics*, with other suitable *Deobstruents*, to open the obstructed *Viscera*, reſerate the *Tubes* deriv'd thence, mend the *cachectic* State of the Blood, and invigorate the *muscular Fibres* by the *Cold-Bath*, which gives a new Spring to the same, I have in some such Cases found very serviceable: But instead of cramping these infirm and tender Constitutions, with *Steel-Boddice*, or *Hooping* them as it were with *Iron*, which disables them

them from those Exercises, so necessary for their Health, and bettering their Habits, I have always advised the Parents or Relations of such Children, to forbear this cruel Usage, and content themselves externally with a *Pad* of Cotton quilted, so far as possible, to conceal the Deformity, and give them all the liberty of Action they could bear; it being a standing *Maxim* with me, that *such as Nature in this wise has made crooked, Art will never be able to make strait.*

I once knew an impudent bold Pretender to these Cures, make a Demand of 200 *l.* of a Lady, for his Steel-Contrivances, and three Years Attendance upon her Child, whose Death, I dare be confident, had been thereby hasten'd, and the bearing out of the *Vertebrae* still farther increas'd, notwithstanding his warranting to make the Child a compleat Shape.

DISLOCATION of the Coccyx, Pubes, and Ileon.

WE have already observ'd, among the *Fractions*, Of the the *Disjunction* (for so I chuse to call it, rather Coccyx, than *Dislocation*) of the Bones of the Coccyx, when, Pubes, and Ileon. by some external force, they are beat in upon the *Rectum*; besides which, we are told, that at some times, though we forgot then to notice it, as in hard Labours of Women with Child, the same Bone is forc'd outwards, the *Ossa Pubis* being likewise disjoin'd, and those of the *Ilea* separated from the *Sacrum* at that time: The first of which, as more pliable and yielding, carries somewhat of probability, but whoever considers the firm uniting of the other, by a *Synchondrosis*, or strong Cartilage, which requires a Knife, and

Hist. 49.

and often a Saw, to divide them at other times, will find it difficult to reconcile this Report: Yet *Hildanus*, whose Judgment and Veracity were never, that I have heard of, called in question, assures us, that he was sensible of the *Disjunction* of these Bones, in the Delivery of his own Wife.

But pretermittting these, which, if fact, require only Rest and Quiet for the Replacing as well as Resettling, we come next to the *Dislocation* of the *Clavicle*, or *Collar-Bone*.

Dislocation of the Collar-Bone.

Of the
Clavicle or
Collar-
Bone.

This Bone, whose Use, as we observ'd among the *Fractures*, is principally to keep out the Shoulder from the *Sternum*, altho' it serves also, together with the other *Process* of the *Scapula*, called *Ancycroides*, or *Coracoides*, in its Conjunction with the *Acromium*, to prevent a *Luxation* upwards of the *Humerus*, has a double *Articulation* by *Synarthrosis*, the one by its flatter Extremity with the *Acromium*, aforesaid of the *Scapula*, from whence, by some outward Force, it sometimes riseth upwards and forwards; the other, by its thicker and more knobbed end, entering a little Pit or Impression, form'd for that end near the *Jugulum*, upon the *Sternum* or Breast-Bone, whence also at sometimes it starts, tho' not so often as its other Extremity, whose Articulation is more expos'd to these Accidents.

When that end next thereto adjoining, flies off from the *Process* of the *Scapula*, the *Acromium* jets out, and the Patient cannot raise up his Arm but with Pain and Difficulty, which falls and is depress'd.

This

Sect. IX. Dislocation of the Collar-Bone.

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This *Dislocation*, or *Disjunction* rather, like that of the *Fracture* of the same Bone, is more easily reduced than retain'd, by reason of the slight Fastening which it has with the *Processus*: However, the Method is much the same as for that, *viz.* by pressing out the top of the *Humerus*, and bringing the two Extremities again together, after which, your *Plaster Compress* well fitted, with your *Defensive* and *Bandage*, as have been directed for the *Fracture* here situate, will be necessary to secure it from flying out again.

Mr. Cowper has intimated in his Writings, that this *Luxation* had been unobserv'd by most Authors; but, If I mistake not, those of any note who handle this Part of *Chyrurgic* Practice, especially among the Moderns, have taken notice thereof: And it might seem strange, that a Case so frequently occurring, should pass unheeded by any of them.

If its rounder and thicker Extreme is thrown up from the *Sternon*, for downwards it cannot fall, being secur'd by the subjacent first Rib, the Method for Replacing is alike, by thrusting out the tip of the *Scapula*, thereby making way for sinking the protuberating Head into its proper *Sinus*, in the *Sternon* aforesaid; after this, by Compress and Deligation, to prevent its rising up again.

DISLOCATION of the Ribs.

THE *Ribs*, which are usually twelve on each side, sometimes thirteen, at others, tho' rarely, eleven; the Author last mention'd says, he has observ'd twelve on the one side, with but eleven on the other: These, I say, are also liable to a *Luxation*, by some outward force impell'd at their Extremity

Dislocation of the Ribs.

Extremity next the *Spine*, it being scarce possible they should be this way parted at the *Sternon*, where they require a strong Knife to divide them, and with which they are so connected by their *Synchondrosis*, as to make together as it were one continued Bone.

'Tis true, they will often protuberate, and together with the *Apophyses* of some others, particularly those at the Wrists and Ankles, appear knotty, as in the *Morbus Anglicus Infantilis*, we call the *Rickets*: But here the *Sternon* riseth also forwards, as well as the *Scapula* sometimes backwards along with them, making the *Bunch* both ways, as we have already observ'd; and for which, that I know of, there is no (at the least, Chirurgic) Cure.

But when the lesser Tubercle is forc'd off from its *Sinus* in the *Vertebra*, or the greater from the transverse *Process* with which we before acquainted you, it was articulate: If thrown outwards in thin People, or much emaciated by Sickness, it is perceptible on the outside of the *Spine*, and must be gradually depress'd, and artfully replac'd by the Hand and Fingers, after due Extension, sinking it again down into its Place.

Some propose, as the Patient sits upon the Ground, the raising of the Arm on that side, above his Head, which, at the same time elevating the *Costa*, makes way, and facilitates the Reduction,

Others, pulling his Arm over a Door, suspend the Body thereby, by which the *Thorax* being raised, the prominent *Rib* is now depress'd, by the Surgeon standing behind.

Again, if the *Luxation* happens inwards, there will be a manifest Vacuity to be felt, by hard Pressing with your Finger on the Place it is flown from

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from, with an Inequality round about the external surface: the *Pleura* also suffers by the Extremity of the *dislocated Costa*, bearing hard against it, exciting Fever with Inflammation, Cough also, and Difficulty of Respiration.

In order to redress this Grievance, having try'd by a gentle Extension, and done what you can by your Fingers; the Patient likewise enlarging the Cavity, by the Management of his Breathing, for your farther Assistance, as we have hinted in discoursing of the *Fracture* of this Part; but ineffectually, the Symptoms also urgent, the last Remedy is Incision, as we there also observ'd, and by the Finger, or Instrument introduced, to raise it up into its Place.

But these Operations, as I have already acquainted you, are rather *Theoretic* than *Practic*; nor is it often, I think I may say exceeding rarely, we have occasion for the Experiment of this nature.

In the joining of the *Ribs* I shall observe farther, that it is only the nine uppermost that have this double Articulation at the same Extreme, before observ'd in our Description of these Parts, viz. the other collateral to the fore-part of the Bodies of the *Vertebrae*, the other to that of the transverse *Process*, the three lowermost being articulated singly to the fore-part of the *Vertebrae*, and touch not the transverse *Processes*: The lowermost neither having its cartilaginous Extremity at the other end, fasten'd to the Rib above it, as the rest of those we call the *Costae Notbæ*: But its Extremity standing out, gives rise, as that curious Anatomist Mr. Cowper takes notice, to a part of the *Musculus Abdominis oblique descendens*.

DISLOCATION of the Sternon, and its Cartilage, nam'd Ensiformis.

Of the
Breast-
Bone, and
Cartilago
Xyphoides

WE have before made mention of the Depression of this Bone, by outward force thereunto offer'd, at the bottom of which, in its middle, there shoots out a cartilaginous Appendix, call'd in Greek, *Xyphoides*, by the *Latins*, *Mucronata*, also *Ensiformis*; which, by like Violence, is liable to a *Subluxation*, or Depression, and by which the upper Orifice of the Ventricle, or Stomach, being offended, which is called otherwise *Scrobiculum Cordis*, by reason of the superior and inferior *Plexus* of the *Stomachi* Nerves here meeting, very dreadful Symptoms do arise, as *Vomiting*, *Cordialgia*, *Convulsion*, *Inflammation*, *Gangrene*, and *Death* soon after, if the Oppression be not remov'd before this last Symptom comes on; which is to be attempted, as we remark'd formerly of the *Sternon*, or Breast-Bone beat down, by laying the Patient supine, or on his Back, with some convex Body under the Shoulder-Blades, at their Basis; then suddenly, or by repeated Jerks, pressing down the tops of his Shoulders, whilst an Assistant does the same with his Hands upon each side of the Ribs, by which, the Breast being rais'd, the depress'd *Xyphoides* riseth also therewith: Cupping-Glasses and the Pitch-Plaister are here likewise in use, to answer the same Intention.

Contrary to this, there are moreover frequent Instances of the same Bone protruding, or thrust outwards, but here we have little Danger from the rising Cartilage, tho' much from the Disease producing it, I mean the *Ascites* and the *Hydrops Pectoris*, of which it is only a natural Consequence,

from

from the Distension of the containing Parts, by the Waters lodg'd in those Cavities, and admits no other Remedy, than what is directed for the *Dropsy* its Parent, with which it stands and falls.

But quitting of the Trunk, we shall now hasten to the Limbs: And first to that of the *Humerus* or Shoulder-Bone.

Dislocation of the Shoulder-Bone.

This Bone, I think, furnisheth more of these *Of the* Accidents, at least what may properly be call'd *Shoulder.* Dislocation, than all the rest of the Body, as being more in the way of Danger, both in lifting and other strong Exercises, as well as Falls and the like Casualties, when it is natural to throw out these Parts, for the safeguard of the Head and Face: And tho' many times a seemingly slight Occasion has given rise thereto, yet we often meet with tough Work in setting them to rights, or reducing the *Luxation* thereof.

The Joint, you know, is compounded of the Head of the *Scapula*, or Shoulder-Blade, which hath a small Cavity, enlarged and made deeper by the Cartilage it is tipp'd with, and the *Apophysis*, or upper part of the *Os Humeri*, called the *Shoulder-Bone*, cover'd over with another, and adapted to the said Cavity, by an *Artbrodia*: Which is, when a small round Head is received and lodg'd in a superficial Cup or Hollow, framed for that use by *Nature*, in the Formation of the Parts.

We have already taken notice of the two other *Processes* of the *Scapula*, which, tho' not immediately concern'd in the Juncture, serve yet, by the tendinous Insertions of the Muscles into

the same, for the farther strengthening the Articulation thereof, and preventing the Head of the *Humerus* from flying upwards, particularly the *Coracoides* or *Coracobrachieus*, which springeth from the *Coracoides* Process of the *Scapula*, and ends about the middle of the *Os Humeri*: Likewise one of the Heads of the *Biceps* entering, which being partly tendinous and partly fleshy, ariseth from the other Process called *Ancynoides*, from whence, descending, by the inside of the Head of the said *Humerus*, it meeteth with its fellow, and, both joining together, become a strong fleshy Muscle, which by a single, but large Tendon, is inserted on the inside of the Head of the *Ulna*.

I need not tell you how often this *Tendon* has made my Heart ach, and I dare say many of yours, when about to open the *Mediani* lying very obscure and deep, and perhaps, do what you can, directly over it.

For obviating this Danger, you will find great Advantage in the divers Management of your *Ligature*, which, as the Arm is extended, by drawing the same outwards in making your Circumvolution, you carry the Vein along with you that way; as, by the like Management thereof inwards, you shift it the like distance from the subjacent Tendon, which, if but a Straw's breadth, is sufficient for a dexterous Performance of the Operation.

The like Alteration is effected, after making your *Ligature*, by taking the Patient's clench'd Fist, into your right Hand, and turning the Thumb either inwards or downwards, or outwards and upwards, as you see best for your purpose: During which Pronation or Supination thereof, if you lay the fore Finger of your Left on the said Tendon

Tendon, you will plainly perceive it to vary its Position, and according to distance the Vein above.

There is this Inconvenience will indeed attend the drawing of the Vein by the Ligature, from the said Part, that, after Removal thereof, the Orifice in the Vein lying now oblique from that in the Skin, the Blood, diffusing in the Interstice, raiseth a *Sugillation*, sometimes of great extent all round about; yet that, although frightful to the Patient, gradually wears off like the other *Echymosis*, from a Blow or Fall. But, returning to our Subject.

The *Humerus* is liable to slip downwards, forwards, and, according to some, though, I think, very rarely, backwards also.

We do indeed at sometimes meet with the Head of this Bone under the pectoral Muscle, but for the most part, or speaking generally, it falls down between the Tendons of the *Musculi Subscapularis*, and the *Biceps Externus*, nesting itself in the *Axilla*, or Armpit: In getting it from whence, unless Care be taken, as it comes to the brims of the little Cup, or *Sinus* in the *Scapula*, to lift it into its Place, it slips forwards through the irregular Extension, and makes that *Luxation* secondarily only: However, I think, I may say modestly, that I have met with twenty, first lodg'd in the *Axilla*, to one upon the Breast.

The *diagnostic* Signs, of this Bone displac'd, are not altogether to be inferr'd from an Inability to its usual Motions: For that sometimes will be owing to a Wrench, or violent Distortion of the Ligaments and Tendons: But, looking strictly on the upper and other Part of the Shoulder, you may, upon a very nice Inspection, perceive the *Deltoides* Muscle to lie more lank and flaccid, than

Diagnosis of the
Shoulder
dislocated.

that on the other side, expos'd for this end also naked before you, having lost its Support, the Head of the said *Humerus*, which bore it out, by which that Part lies now flatter, and less plump, or roundish, than its fellow; and even in full and corpulent Bodies, by pressing your Fingers hard in upon the Part, you will find Admittance for the same into the Cavity, which is now left by the Head of the Bone, at leastwise feel the edges of the Cup it has forsaken.

Again, if thrusting your said Fingers as strongly into the *Axilla*, whilst the Arm is carefully lifted, by an Assistant, into an *horizontal* Position, that is, the Hands and Fingers making a strait Line with the Head of the *Scapula*, you will feel the *Apophysis* of the said *luxated Humerus*, like some hard and solid Body, lodg'd therein, and denying that easy Admittance you may find in the opposite Armpit.

A farther Evidence of this *Luxation*, is the Patient's Elbow bearing outward from his side, to which he cannot suffer it should be brought close without great Pain, nor will it be retain'd in that Figure, being kept out by means of its Head lodg'd, as aforesaid, in the *Axilla*; by which he is enabled much easier to move his Arm backwards, than to bring it forwards to lay the lame Hand upon the sound Shoulder, or his Fingers to feed himself: Nor did I ever know any one under these Misfortunes, that without the other Arm, or some Assistants to support it, was able to keep the same without falling down again involuntarily, upon a level Extension, although brought up for him, by raising it, as a Trial, into the said Posture; much less, if higher elevated: And this not through any Defect in the *Lever*s, the *Muscles*, but in the Stay, or *Fulcrum*, to support the *Pondus* they lift up. But

But, besides this Enquiry of the Surgeon, the Patient will often complain, that he feels somewhat unusual and hard in his Armpit; and, comparing his Arms as they hang down by his sides, the lame one will be found somewhat longer than its fellow.

As for the *Prognostics* of this particular *Dislocation*, if the same be recent, and proper Help administer'd, 'tis very rare, I think, but that either by the simple Extension with the Hand, or the farther Aid from Instruments well manag'd, we succeed in the Enterprize: But where the Case has been for sometime overlook'd, or when, by the Symptoms of Fever; Inflammation or Fluxion attending, forc'd to be delay'd, there will be found the greater Difficulty, and Hazard of speeding in the Undertaking: Yet, at two Months from the Accident, I have reduc'd this Bone, though it had been twice before ineffectually set upon; and the Patient, after length of time, retriev'd as good use of the Limb as before. I cannot say, in thirty Years, that I have known more than two who have fail'd of their Cure, by some Means or other, where I have been concern'd; and one of them, I think verily, might have had hers, if, through Peevishness at a Miscarrying in the first Attempt, she had not oppos'd a second Effort, by other Methods and farther Assistance, in order to her Relief.

There is another sort of these *Dislocations*, happening at some times, but, I think, oftener befalls the Joint of the Hip, from a Congestion of Humour loosening the Ligaments, by which a *Subluxation* happens, when the Head of the Bone comes down as it were with the Tip of the Cartilage; or a compleat one, falling quite out: And these are Cases truly deplorable; for though you

may meet with no great trouble, in reducing the prolaps'd *Apophysis* to its Socket, or Cavity; yet, by reason of the relax'd Ligaments, it slips presently out again. But now to the Cure.

*Several
Ways of
Reduction
without
an Instru-
ment.*

There have been many Ways invented for the Replacing this Bone out of Joint, as well by the *Hand* as *Instruments*, which in some robust or strong muscular Bodies, whose Fibres are over tense, dry and rigid, are oftentimes requir'd.

Of the first sort, *i. e.* by the *Hand*, I have often practis'd the following, with success.

When, by Enquiry, as above, you have satisfy'd yourself, that the Head of the *Humerus* is displac'd, and lodg'd in the *Axilla*, you are to set your Patient upon a Stool, or Chair, one of your Assistants standing over him, with both his Hands to press down the *Scapula*, that it may not rise with the Head of the *Humerus*, whilst another, on the side opposite, puts his Arm round the Patient's Body, with his Hands towards the Armpit, whose Office it is to make the *Counter-Extension*, pulling the Trunk of the Body to him with all his strength, whilst a third is ready with a Napkin, turn'd round about the Elbow and twisted, setting his ~~Foot~~ against that of the Chair, or Stool, for his better stay and exerting himself in drawing out the Arm; a fourth grasping also with both Hands at the Wrist below, and assisting in the intended Extension.

These being all set, and ready at their several Posts, let the Arm be rais'd in a strait Line with the top of the Shoulder; then order that both the Extension and the Counter-Extension be begun at first more gently, that, if the lesser Force will do, the greater may be avoided, and the Limb less weaken'd thereby; whilst yourself, standing on the outside of the Arm, with your Fingers
close

close up in the *Axilla*, and your Thumbs on each side, to observe the Motion of the Bone, and guide it coming forwards, which, so soon as you can get behind the Head thereof, you may facilitate; and, bringing it even with the brims of the *Scapula*, kept down as aforesaid, raise the same up to its Socket, into which it will sometimes very audibly snap, or cluck.

This Way, by the Hand and Fingers, is not only the securest of all others, but, if your Extenders are rightly qualify'd for the Work, (as well in Strength as Capacity otherways) as likely to succeed as most others, by the simple Extension, or manual Undertaking only.

Mr. *Wiseman*, at these times, orders the Elbow, with the Palm of the Hand turn'd outwards, to be brought suddenly towards the Spine of the Back, by the one Hand, whilst, with the other in the *Axilla*, the Head of the *Humerus* is rais'd, an Assistant keeping down the *Scapula* to receive it.

If it is thrown forwards upon the Breast, the Elbow is ordered to be held down in like manner to the Spine, whilst the Artift with his Hands, forceth back the Bone into its Place.

How far these Methods may succeed with Children and young People, of a laxer Frame, whose muscular Fibres are more ductile, yielding, soft and pliable, I shall not dispute here: But in hard, labouring and strong Bodies, where the said Fibres are more tense, and the Muscles themselves, as we say, brawny, farther Assistance, and greater Strength, I am sure, are generally wanting. I have, 'tis true, in these tender Subjects, sometimes replac'd this *Dislocation*, by turning in this manner the Hand behind, with the Palm outward; which Motion naturally throws the Head
of

of the Bone forwards, so that, only laying my other Hand on the top of the Shoulder, to keep the same from rising, the Bone has slip'd in without more to do, or any farther trouble.

Another Way, when it is thrown down far into the *Axilla*, requiring still greater Force to dislodge, is with the same Assistants, plac'd as in the first *Apparatus*; unless, that the Patient be set lower, if not all upon the ground, by taking into your own Hands a strong Napkin, in the middle of which a small globular Body, as a Ball, (for want of which I have sometimes us'd a common Wash-ball) is wrapp'd up: This being placed against the Armpit, the two ends of your Napkin thus folded, are brought close up on each side thereof, and after the Extension and Counter-Extension are begun as formerly, so soon as the Head of the Bone gives way, and is moving out, with both ends of the said Napkin rightly manag'd, without wriggling to either side, you are forcibly to lift it up, in a right Line, lest otherwise drawing more especially inwards, as it comes out, it slip forward under the pectoral Muscle, (a Case I have known fall out) till you hear the disjointed Bone slap into its place; or, if you hear it not, by reason of the Patient's roaring, or other Noise about you, yet may you inform yourself quickly that it is there arriv'd, by his sudden Ease, the Cavity in the *Axilla* being now clear and free from its late troublesome Guest, and the Hollow on the outside of the *Scapula* again fill'd up; the upper part of the *Humerus* appearing also round and full, as before, or like its fellow: He can also now bring his Elbow close to his side, without complaining, and his Arm forwards as well as backwards.

As to this last Way of Reduction, if greater Strength be requir'd, in the Place of a Napkin, a Leather

Leather-Strap, like that of the Shoe-makers,
 or for want thereof, a narrow Horse-Girth is
 made use of, the ends of which (having first
 rag'd a proper length) being strongly fasten'd to-
 gether, the Patient's Arm is put through; but
 first of all the Ball, as beforemention'd, wrapp'd
 up in the Napkin, must be thrust close up to the
 Axilla, and the ends of the Cloth, or Napkin, in
 which it is wrapp'd, spread on each side, that the
 Strap or Girth may not offend the Arm: Then,
 fixing steadily the midst of the lower part there-
 of, upon the said Ball under the Armpit, put al-
 so your own Neck, and, if you please, one of
 your Shoulders through the upper part: when,
 stooping just over your Patient, with the flat of
 your Hands resting on the top of his Shoulder,
 instead of any Assistant thus employed in the other
 Way of Reduction, whose Place you not only
 well supply, but augment very much your com-
 manding Power in the Elevation.

Thus ordering the same, as we have already
 above directed, so soon as you perceive the top of
 the *Humerus* to advance, (it being to no purpose
 sooner) raise up your Body, with the Strap upon
 your Shoulder, forcibly, and you shall frequently
 hear the Bone cluck into its place: At the same
 time it will also be convenient, that an Assistant,
 with his Hands on each side the *Axilla*, secure
 the Girth or Strap from slipping off the Ball,
 and the Head also of the *Humerus* flying else-
 where.

The last Method, without an Instrument, which
 I have practis'd, and by which I have reduc'd,
 or (assisting at the Reduction by others) seen re-
 duc'd, some of these Misfortunes, which have
 been thought irretrievable, because the Instru-
 ment

ment had not succeeded, is that by the *Heel*, which has not often fail'd me.

In order to this, your Patient is laid along supine or upon his Back, on a Quilt, or Blanket spread upon the Floor, naked from the Waste upwards, at least on the Side affected, as he is to be in all the other Ways of Reduction: When, sitting down close by him, with your Head towards his Heel, let an Assistant place himself behind with the Sole of his Foot (taking off his Shoe for the Work) upon the Patient's Shoulder, having the two ends of a strong Napkin (in the midst of which the Ball is wrapp'd up, and plac'd in the Armpit, as before) in his Hands, whilst a third Person is employ'd to keep the Body steady. Then clapping your own Heel of the same side close up against the Ball in his Armpit, with your Hands at the same time taking fast hold above his Wrist; and thus prepar'd, whilst your Assistant helps above in the Counter-Extension, you with your utmost strength are to pull downwards, drawing thereby the Head of the *Humerus* out of the *Axilla*; thrusting your Heel against the Ball, and, finding it give way, turning the same a little outwards, you will throw the Bone into its Socket, and accomplish your Work: After which, you must immediately slacken your Extension, lest, by over-halling the Ligaments and Tendons, you render it incapable of keeping its Place.

In these two last Ways, by the *Girth* and *Heel*, the Artist has certainly a vast command in exerting of his Strength, whilst his Hands, resting on the Shoulder in the first Way, are, as it may be said, a *Fulcrum*, or Stay, on which he is able, by means of the *Girth* thereon, to raise up the Body, together with the impending Weight: The

like

like of the thrusting one way with the *Heel*, and the Arms drawing to the contrary : From whence, as our late *mathematical Physicians* have laid it down, as a *Proposition* indisputable, *That the whole Strength of an animal Body, is the Force of all his Muscles taken together* : So may we infer, That almost, if not the *whole*, of the Muscles of an human Body are at these times in act.

Now if, as one of these Gentlemen asserts, the *Flexor Policis*, singly taken, be equal to 3720 lb Weight, to what an immense and incredible one must that of the whole Number amount ! Hastening now again to our Subject.

These, I think, are the most usual Methods of Replacing the *Luxation* singly by the *Hand*, or without any *Instrument*, which, if well order'd, or manag'd by Assistants us'd to the Work, all, if they could be had, Professors of the Art, much Pain and Risque, or Hazard by those *Instruments*, might often be avoided : For, as before remark'd, although great Force be oft requir'd in the Extension, yet that singly, without Art conjoin'd, will not avail ; and you may tear the Limb from the Trunk, before you replace the Joint, if unskill'd in enterprising, or going about it.

For Instance : If your Ball in the *Axilla* be not duly plac'd, and the Elevation of the Head of the Bone prolaps'd, as rightly tim'd to suit its coming even with the brims of the *Scapula*, by raising sooner, you only lift up the Neck of that Bone ; and by deferring longer, or lifting out of a strait Line, either slip it under the Breast, or tear the Fibres to no purpose ; whence, if it be afterwards replac'd, there may, through the great Weakness thereof, be hazard of its falling out again, as in that arising by *Congestion*, before also taken notice of.

One thing farther I thought proper to intimate in some of these Ways of Operating, particularly the first, that the Persons employ'd in making the Extension secure to themselves a good footing, by which the Work is carry'd on with double the force it would be otherways: And farther, that when the *Luxation* is forwards, no Ball, or other globular Body, be thrust into the Armpit, but, having made the Extension a little oblique, rather drawing from the Breast, than outright from the *Axilla*, let the Surgeon, with his Hand, forward the return of the Bone; whilst another, with a single Napkin underneath, lifts it up, as it comes towards the Armpit, into its Socket: In a Word, whether the Extension be made one way or another, so soon as you discover the Bone sufficiently advanc'd, the sudden sinking of the Elbow to the side, by the Extenders, contributes as much as any thing to thrust the Bone up to its Place.

Several
Instru-
ments for
Reducing
the Hu-
merus.

The *Instruments* us'd for the same Work are the *Coulstaff*, or *Lever*, with a Wooden-Ball fix'd on the middle, to enter the Hollow under the Arm; also a Wooden-Pin on each side, to enclose the same; and whilst the Limb is, as in the first Way of Reduction, upon the stretch, the *Instrument* is rais'd by a couple of strong Men, in order to throw it up again to its place.

But this *Instrument*, by reason of the Mischiefs thereby ensuing, such as the fracturing, or snapping off the Head of the *Humerus*, is not in so much Request now, as in Times past it has been: I must own I have formerly us'd it, but confess I prefer the *Ambi* thereunto, which is the safer, and, when duly manag'd, as seldom fails of Success as any; though here also it is possible for an Accident of like nature to happen, by the too hasty and violent pressing down of the Arm, be-

fore

fore the top of the *Humerus* is brought out of the *Axilla*.

The *Skrew* with the *Crutch-Head* and *Turniket*, is a later invented *Instrument*, and accounted surer by some, as well as safer than the *Ambi*: And where the Bone is beat into the Armpit, that all other Ways seem less likely to effect the Work, or where the latter have been attempted in vain, as in some whose Muscles are exceeding tense, or in the squalid, tough, and, as they commonly name them, raw-bon'd People, the *Crutch* with *Jack* and *Pullies*, call'd the *Tackle*.

This is an *Instrument* in the form of a *Crutch*, for the convenience of carrying, made in two or three Joints, the *Crutch-end* having a Wooden-Ball rising out in the midst of its Hollow, to thrust under the Arm, like that on the *Screw* before-mention'd, with an Iron-Spike at the other Extreme, for its steady fixing on the Floor.

In the use of these two last, contrary to the *Ambi*, where the Patient sits down on the side thereof, he is now standing and supported, whilst the Head of the sloping *Crutch* being plac'd in the Hollow of the Arm, and there kept close by the Surgeon, the Hand or Wrist is brought down by the side of the same, being first well defended by soft Cloths, from galling, or being chaf'd in the Extension; and made secure by proper Ligature to the *Pulley*; fasten'd also below to the Floor, by which you draw out the Limb as you please, and, being come out far enough, raise by the Head of the *Crutch* into its former seat.

These *Instruments* are all so common now, especially in *London*, as to need, I think, no other Description; but in their Management I must again inculcate, that it is highly necessary some expert Proficient at this Work, or good Artist, should be

be always plac'd at the head of the same, with his Hands about the Armpit, that, as he finds occasion, he may alter its Position, slacken the *Tur-niket* a little for that end, and taking the Nick, as we say, of Time, perceiving the *Apophysis* coming out, by suddenly ordering the Arm to be depress'd, he lifts up the Bone, as aforesaid, to its pristine Seat.

There are, besides these now mention'd, several other Ways of setting a *Shoulder* out of joint, made mention of also by famous Authors: Such as hanging the Patient, by the lame Arm, over a tall Man's Shoulders, suspending the same upon a Door, or the Rounds of a Ladder, and hastily withdrawing the Chair, or Form, on which he stood; by which, they tell you, the Head of the *Shoulder-Bone* is not only drawn out of the Armpit, but rais'd also at the same time into its *Receptaculum* in the Shoulder-Blade.

But these, and such like rustical Experiments, are fit only for *Plowmen* and *Porters* to put in Practice, who neither know when a Bone is out, although representing every Accident to be so, neither yet how to put one in that really is out, but practise the like rude Feats by way of Amusement, to delude the Populace.

To proceed, and it is, I think, time, supposing the Work of Reduction, by one or other of the former Methods, finish'd, and the Joint set to rights, your *Defensative* and *Bandage*, as for the *fractur'd* and *distorted Clavicle*, are to be apply'd. A Small Ball, or other somewhat softer but roundish Body, being first plac'd close in the *Axilla* or Armpit, wrapp'd up in a Cloth, the ends of which are brought slanting over the top of the Shoulder, whilst the Elbow, after finishing your *Bandage*, is likewise close down to the side, which

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Sect. IX. Dislocation of the Humerus.

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if well secur'd in that Posture, 'tis scarce possible for it to relapse: Upon which account, as a turn or two may be made round the Arm at the conclusion, to keep the Dressings smooth, so likewise may it not be amiss, to take at least another over the outside thereof, quite round the Trunk, that may inclose and secure it in the said Position, that heedlessly, or at unawares, it may not be rais'd thence.

One Caution more I think necessary to give you, which is, that in the use of *Instruments* particularly, and indeed in the common simple Extension, you always take care, that the whole Arm above, as well as below the Elbow, and especially round about the Armpit, where the Head of the *Instrument* is plac'd, are well defended by soft Cloths, from being injur'd thereby, together with the *Ligatures* ty'd round about, to fasten the Limb thereto, for its being orderly extended: And, having compleated your Work, let the same be pinn'd up in a Scarfe or Napkin, observing upon all these occasions a due *Regimen*, by *Bleeding* and *spare Diet*, to prevent a *Fever*, *Inflammation*, and other Accidents supervening, where great force has been us'd in reducing the *Luxation*.

At the second Opening, sooner or later as you find occasion, you are also to take care that the whole Joint, if not the whole Limb, be well embrocated *cum Ol. Rosar. & Lumbr. vel cum Ung. Sambuc.* And that if the Skin has been, by the preceeding rough Usage, any where excoriated, the same be dress'd up with Lenients, and, after Digestion, cicatriz'd with my *Cerat de Lapide Calam.* spread on Cloth like a Plaister, or other agreeable *Epulotic*, tho', I think, nothing comes up to that, which may be apply'd, from first to

last: And altho' you omit this circular Turn of your Roller, to bind down the Arm to his side, at this second Dressing, yet he must have strict Charge given him for some Days, that he raise it not up till the Bone is again well settled, and that the Fibres have in some measure regain'd their enfeebled Tone, or the Muscles compos'd thereof, their Strength.

Nor surely is the Patient at all times to be dubious, that his Surgeon has not well perform'd his Work, or set his Limb in order, because he cannot for some Weeks, or perhaps Months after, raise it as before: Since where *Instruments* have been us'd, and great Extension of the Muscles thereby occasion'd, it is not admirable, more particularly in diseas'd Habits, that long time should be requir'd for its Recovery, so violently distended, or put upon the Tenter as it were, if not some of them torn asunder.

The Examples of a *dislocated Humerus* are so very common, that I think it needless to insert them: Yet meeting once with one of them, that gave me, as well as my Assistants, more than ordinary Trouble, I will here recite it.

HIST. 50. An elderly Gentleman, keeping at that time a *Thread-Shop*, by the *Pump*, opposite to the end of *Threadneedle-Street*, in *Bishopsgate-Street*, of a dry Habit, or a tough, muscular Body, sitting in his Chair asleep, after a large Evening's Draught, fell out of the same, and pitch'd with the top of his Arm against the Stone-Pavement in his Kitchen, by which, without other Violence than the Weight of his Body, at this time more than commonly helpless, he threw the *Humerus* from its Socket into the *Axilla*: Which, notwithstanding it thus easily flew out, was not but with great Force and Difficulty replac'd.

Being call'd singly, with the best Instruction I could give his Servants, how to behave in the Extension, and finding that the simple one by the Hand would not reach it, I try'd the Strap over my Shoulder, standing above him as he was plac'd and supported on a low Chair, in which Posture, stooping somewhat with my Hands upon the *Scapula*; to keep it from rising, I had command enough for the Elevation, had the Extension been but sufficient to have drawn out the Bone from the *Axilla*; to the brims of the *Scapula*: But missing my aim therein, I desisted, and call'd in Mr. *Bentham*, my Neighbour, then living in *Devonshire-Street*, when jointly we try'd the Napkin with a Ball in the midst thereof, plac'd in the Hollow of the Arm, he lifting at the same, preferring it to the *Girth*, or *Strap*, whilst I assisted at the Extension of the Arm with two others: A strong Man with his Arm round the Trunk, and his Hands as high as conveniently they could be plac'd, to make the *Counter-Extension*, with another standing over to keep down the Shoulder-Blade: But neither thus, with the utmost of our Efforts, could we perceive the Head of the *Humerus* to move out: Wherefore, being unwilling to lose this Opportunity, which we could not have again for several Days, or till the Fluxion, brought on by our fruitless Extension, was taken off: And by which time the Success might be still more dubious; we sent to Mr. *William Babington*, who brought along with him his *never-failing Ambi*, which he took principally to direct himself, whilst we were at the Arm, both above and below the *Cubit*, making the Extension; yet still, in opposition to our utmost Endeavours, the Muscles were so tough and rigid, that they would not give way: Wherefore I now propos'd the laying him along on his Back, upon

a Blanket extended on the Floor, whilst Mr. *Babington* lay revers'd on the same side, taking fast hold above the Wrist with both his Hands, thrusting his Heel at the same time high up into the Hollow of the Arm; myself, with a strong Napkin roll'd up, and the Ball, as above describ'd, lodg'd therein, (on which his said Heel was fix'd) pull'd up the two ends thereof, resting my Foot upon his Shoulder, and therewith keeping down the *Scapula*, made a *Counter-Extension*; Mr. *Bentham* assisting at the Stretch below, by a Napkin turn'd over, and twisted above the *Cubit*, having another Person employ'd in keeping down his Body, preventing its rising up, or turning sideways.

And thus, giving the Word, the *Extension* was begun, as well above as below, when as we were exerting the utmost of our Power, and myself now beginning to despair of his Case, Mr. *Babington*, perceiving the Bone moving after our second Essay, with his Heel, suddenly and strongly turn'd outwards, threw up the same, and we could all plainly hear it cluck into its Place: Then, lifting him from the Ground, we laid on our *Defensatroe*, and roll'd him securely up, being forc'd to inspect his Arm daily, by reason of the Skin flea'd off all round about, (notwithstanding all the Precaution taken) by the several Methods of *Extension* practis'd for the Reduction.

And thus was this very tough Piece of Work, even at the Instant we were about to relinquish it unfinish'd, at length accomplish'd, and the old Gentleman, who being full of Wine, was less sensible of the Pain, although he roar'd out, and begg'd us to forbear, recover'd (though it was long time first) as compleat use of his Arm as before the Accident.

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To mitigate the Symptoms, he was presently let Blood, and for some time, by the Direction of his Physician, Dr. *Tyson*, kept to the use of *pectoral balsamic* and *vulnerary Decoctions*, *Electuaries*, *Linctus's*, and *oily Draughts*, for the Relief of his Breast, which he complain'd was very sore a long while after : And indeed the muscular Fibres, by being thus hal'd, were so enfeebled in their Tone, that they could not recover themselves, but by degrees and gentle Motion, which occasion'd both the Patient and his Friends to be a great while jealous, that, his Recovery being so very slow, we had put him to all this Torture, as they call'd it, to no purpose, his Bone being still, as they surmiz'd, out of joint : But, by the gradual Increase of his Strength, and gaining better use thereof, he was at length convinc'd of his Error in thus censuring of us ; and, as before he had handsomely gratify'd my two Assistants, so he now as generously and thankfully paid me for my Attendance.

A Case somewhat of kin to the foregoing, about Hist. 51. the same time, and in as tough a Subject, I was call'd to, befalling a Brewer's Servant ; when after some ineffectual Attempts, by other Ways, I call'd in Mr. *William Petty*, and two or three other Assistants : And, as the Patient was supported upon his Feet, we plac'd the *Crutch-Head* in the hollow of the Armpit ; and then, fixing our *Pully* and *Jack* upon the Floor commodiously for the Work, we brought down the Arm thereto, which being thus bound down to the same, we were able to make what Extension we pleas'd, the Head of the Crutch supplying the Counter-Stretch ; and, after the Tackle had been work'd up some time, perceiving the *Humerus* dislodg'd, and coming out to the edge of the *Scapula*, the said Crutch-Head was on each side strongly rais'd upwards, and the dislocated Shoulder-Bone flew sensibly into its Place.

But in these rough Ways of Reduction, the Muscles are a long time in regaining their former Power of Motion: And great Caution, by a gradual Procedure, is here also requir'd, lest first of all, by the sudden depressing of the Arm, and forcibly lifting up the Crutch-Head, before the Bone comes forward, you snap off the same; at least its Tip or Cartilage, together with that surrounding the brims of the *Scapula*, receiving the said *Apothysis* of the Shoulder-Bone. Secondly, by an Overstretch of the Fibres, especially in antient People, and morbid Habits, you excite Convulsion of the Nerves, and perhaps *Gangrene*, as I have known fall out, with Mortification, from the Pain and Fluxion.

HIST. 52. Soon after the latter Improvement of the *Skrew*, I was call'd in by Mr. *Joseph Tanner*, to a Baker, in the same Neighbourhood with the old Threadman, in *Bishopsgate-Street*, who, by a Fall, had thrown out the *Humerus*. I was desir'd to bring the said Instrument along with me, and accordingly, having enter'd its Head close in the *Axilla*, and, with the common gartering Ligature, made fast the Arm thereto, I took the *Turniket*, and kept the *Skrew* in Play, till Mr. *Tanner* at the upper end, finding his Opportunity, order'd the Arm to be brought down, and at the same Instant, rais'd up the Bone to its Place: After which, loosening the Ligature, we dress'd up as usually in the like Cases, and the Patient soon recover'd as good use of the Limb, as before.

I shall give you one Instance more of a Case of this nature, and, as I remember, the second only I have been concern'd in, failing of Success at last, which, I think too, might fairly be imputed to the Petulancy and Obstinacy of the Patient herself; refusing us a second Trial, with more

Assistants

Assistants and different Instruments, for her Help and Recovery. The Case as follows:

A Gentlewoman middle ag'd, of a somewhat HIST. 53: full Habit, with plump, soft, and therefore one might have thought more pliable, muscular Fibres, being thrown out of a *Chaise*, and pitching, with her Arm against some solid Body in the way, beat out the Shoulder; which Accident being not discover'd by the Surgeon, but mistaken for a *Fracture*, had accordingly been dress'd up: But, she still Complaining, I was consulted, when finding the Arm in good Figure, and being fearful of disordering the tender *Callus*, or giving Occasion to report that I had thereby disturb'd the *Fracture*, I declin'd lifting up, or otherways meddling with the Limb, and stood by whilst the *Bandage* and *Splints* were again put on. But, about a Fortnight after, I was desired to give them a second Visit, and finding her still complaining of great Pain and Uneasiness, when the Dressings were taken off, I adventur'd, tho' very carefully, to raise up the Limb, and, feeling all round, could not discover any Signs of *Callus*, or Appearance of a *Fracture*; so that taking the Arm more boldly into my Hand to try the Motion, and looking on the top of the Shoulder, though she was very fat, yet the Muscles not lying so round and full as they ought, I began to suspect, that, instead of the suppos'd *Fracture*, we had a *Dislocation*: Accordingly, pressing hard with my Fingers through the *Deltoides*, I could plainly perceive the empty Cavity of the *Scapula*, and as plainly feel the Head of the *Humerus* lodg'd in the *Axilla*: Upon which, taking the Surgeon aside, I gave my Judgment of the same, and advis'd forthwith that some Artist should be call'd in to his Assistance.

The next day, when we had made as favourable a Representation of the Case, as it would allow, in regard of the Surgeon's Oversight about a *Fracture*; we met Mr. *James Fern*, Senior Surgeon of *St. Thomas's Hospital*, a Gentleman of strict Probity, good Learning, and sound Judgment; to whom lending what Assistance I could, we jointly made Extension upon the *Ambi*; but however promising a Subject we had to practise on, yet, by the length of time, the Bone was so fast lock'd in, and the Fibres contracted, that the *Instrument* with the too slender Extension we were now capable of making, much less the simple one by the Hand, first of all enterpriz'd, would not reach it: So that desisting for that time, we order'd an *emollient Liniment*, to lubricate the Parts, in order to a farther Attempt, when the Fluxion was taken off, and some slight Excoriations heal'd: But it happen'd in the interim, that, by the advice of some Friends, the famous *Southwark-Bone-setter* was recommended to her, who, taking up her Arm, gave it a sudden Jerk, and persuaded her he had set all to rights: So that coming to see her two or three Days after, in order to persuade her to give way to some farther Trial, she receiv'd me so very coldly, that I suspected what had fall'n out. She then told me that what three of us together could not do, tho' pulling almost her Arm off, was now done by one Man with little trouble, merely by a slight of Hand, and she was very well again.

I had been too much acquainted with the vile Impositions of this kind, practis'd by designing Men and cozening Knaves upon the Ignorant, to give much credit to the Relation: And indeed my Fingers itch'd, as we say, to be impress'd upon the top or neck of the *Scapula*; when, letting her

her go on with some other great Atchievements she had been told of like kind, perform'd by this Person, where the Surgeons had been foil'd, I desir'd only the liberty of laying one Finger upon her naked Shoulder; which, by the persuasion of a Gentlewoman then present, was granted, and I presently discover'd the Bone still wanting in its Socket, lying as before in the hollow of the Armpit.

I then told her how she had been impos'd on, and persuaded her all I could, if she intended not to remain always lame, that she would consult two or three able Surgeons, and see what farther might be done; assuring her, as I had no other Reason, of the great probability there was yet of Success: But, instead of hearkening to my Advice, she suffer'd herself to be yet again seduc'd by the Name of *Bone-setter*, believing it was properly the business of that Set of *Impostors*, and not the Surgeons, and put herself now under the Hands of one *Pr——*, at the other end of the Town, who whether more honestly or judiciously I know not, but as ineffectually, after various ways of pulling and haling, left the Bone where he found it. Since which time, despairing of Help, she now rests content as it is.

DISLOCATION of the Cubit.

BENEATH the Shoulder about the middle way between the ends of the Fingers and the uppermost part thereof, is plac'd the *Cubitus*, or Elbow, which, is likewise subjected to be *luxated* both forwards and backwards, as well as upwards and downwards.

This Joint is made up of the lower *Apophysis*, of the *Os Humeri* aforesaid, and the upper of the *Ulna*,

Dislocation of the Elbow.

Ulna, by a Species of the *Ginglimus* in *Diarthrofis*, as the *Vertebra* in the *Synarthrofis*: The *Ulna* having two *Processes*, an anterior and posterior, the first being receiv'd into the forward *Sinus* of the *Humerus*, upon the Flexion of the Joint; the latter entering the backward Cavity of the same, upon Extension, which, by *Anatomists*, is call'd *Olecranon*, by the common People, the Point or Tip of the Elbow; a Part remarkable for the acute Pain ensuing a smart Blow thereon, owing chiefly to the tendinous Insertions of the *Extensores Ulna* about the same.

It is in this backward Cavity, that the *Cubit*, or Elbow, is stopp'd from passing farther than the *Linea Recta*, or strait Line: At the same end it has likewise a double *Sinus*, the one at its outside, receiving into its Head the top of the *Radius*, its Companion; the other between the *Processes* before-mention'd, receiving a Protuberance of the *Humerus*; this last is call'd *Trochlea*, the *Process* now observ'd moving therein as on a Pully.

The *Radius*, which is plac'd on the outside of the *Ulna*, comes in also for a share, though but a small one, in this Articulation, its upper part not only joining and supporting the *Ulna* sideways; but having farthermore its Tip indented or excavated, for the outer Protuberance of the *Humerus* to play upon, when either bent or stretch'd out: The inferior, or lower *Appendices* of these Bones, we shall observe presently, when we come to speak of the *Dislocation* of the *Carpus*.

The Joint of the *Cubit* is farther strengthen'd by *Syneurosis*, or a ligamentous Tye, being also bound down by the Muscles, and their *Aponeuroses*, or tendinous Expansions, that one would think it very difficult to displace it, and indeed it is rare to find other than a *Subluxation*, or a *Semi-Dislocation*.

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If it fall out forwards, you will find the Prominence, or knobby Rising in the Bend, as we call it commonly, of the Arm, or a Vacuity, or empty Space, behind above the *Olecranon*; the Hand falls straight down, reclining backwards, the Flexion being hinder'd so, that the Patient is unable to bring it towards his Shoulder-Bone, or make therewith the common Angle with the Point of his Elbow.

The Manner of Reducing this *Luxation* is, whilst your two Assistants, the one griping about the middle of the *Humerus*, the other between the Wrist and the said Joint of the *Cubitus*, gradually draw it out, you are to place your two Thumbs on the prominent part before, with your Fingers opposite behind, about the back part of the Juncture, when observing the Extension sufficient for your purpose, you are, with your said Thumbs, to press back the Bone into its Place, giving direction to the lower Extender, to bring up the Wrist towards the Shoulder.

I have at some times reduc'd this *Luxation* in young Children, by taking hold of the Wrist with my right Hand, a second Person drawing gently above the Elbow; and, by the Thumb of my Left, forc'd back the Bone to its Place, whilst, inflecting the *Cubit*, I have heard the Cluck, and thus easily set all to rights.

But in rustic and tough Habits, where this simple Extension does not avail, we are directed to the *Girth* or *Strap*, like that for the Shoulder, but much longer; and, having plac'd a thick Bolster of Cloth upon the rising Head, putting the Arm through, let the one end be directed to the same, whilst your own Foot is plac'd upon the other: Then, making room as before by your Extension, you are to press hard upon the said *Girth*, and, bring-

bringing up the Arm at the Wrist, you shall hear the Bone snap into its place behind: But, in your bearing upon the *Girth* as aforesaid, it behoves you carefully to observe, that the Force be made direct against the Interstice of the Joint, and, in your Extension keep the Arm rather towards a Curve, than a Strait.

When the *Luxation* is backward, the unusual Cavity is felt on the fore-part, and the Bearing out behind: The Arm is shorten'd, and brought so inwards, that the Patient can by no means stretch it forth.

In remedying which, having made your Extension by your Assistants, and thereby drawn out the Limb with your own Hand, you are to force the over-bearing *Apophysis* back into its Socket.

For this end the Arm is sometimes put round a Pillar, the Bend of the *Cubit* being brought close thereto, whilst, with a Strap fasten'd on the Protuberance behind, the same is strongly pull'd forwards, and the Bone thereby resettl'd.

But here you must observe, you put not the Arm upon a flex Posture, which would be a Means of farther widening your Separation, and obstruct your Work.

Again, if the Bone slips upwards, you will find the Rising, or Inequality, upon the same Part, whilst feeling beneath, you will miss the Bone, I mean its inferior Part, as, when beat downwards, the said Vacancy is perceptible at the top, and the Protuberance underneath: At which time, having made a suitable Extension, you force the *Processus* back the Way it slipp'd, pressing on its Prominence, till you have either rais'd it when beat down, or depress'd it when starting upwards, and settl'd it in its former Place: After which,
your

your *Defensative* with *Compress* and *Bolsters* dipp'd in *Oxyerate*, &c. together with the *Bandage*, as for a *Fracture* on the Joint, are what only remain in order to the Cure.

I have sometimes known a *Fracture* of the *Processes* of those Bones, at least a Separation of the cartilaginous Tips, mistaken for a *Dislocation*; and, I believe, more frequently falls out than observed at the time of the Accident, being truly a bad Case, and discoverable by the crushing Noise under the Fingers, upon the handling of the Joint, occasioning usually a Stiffness ever after of the same.

When this Consequence is fear'd, the best way is to secure a Figure betwixt a Rect-Angle and a Right-Line, or to bring the Arm towards a Flexure: And, after fastening of the *Callus*, you must use your utmost, by lubricating Remedies externally, to regain what you can of the Motion; of which before in another Place.

DISLOCATION of the Carpus.

THE *Luxation* of the *Carpus*, or Wrist, succeeds next; which Articulation is formed by the lower *Process* of the *Ulna* terminating therein, with a small round Head, impress'd for the reception of one of its Bones, on the side whereof there is a kind of *Appendage*, nam'd *Styloides*, which, by the Help of a *Syneurosis*, or ligamentous Fastening, is tied to the same, and the lower Extreme also of the *Radius*, which, having received the *Ulna* in a *Sinus* for that end, descends still farther, and at its Extremity has two other Dents, or Impressions, for the reception of some other Bones of the *Carpus*, which are eight in all, placed in two Ranks, call'd

call'd otherwise, *Phalanges*: one of which however seems to lie a little out of order, the uppermost being join'd, by in *Artbrodia* in the *Diarthrosis*, to the *Ulna* and *Radius*, as aforesaid; the lower, by an *Harmonia*, to those above, and to the four *Metacarpal* Bones below, by *Synarthrosis*.

They are also farther connected among themselves, by proper Ligaments, as well as by the common, call'd *Annular*; yet, notwithstanding, by great Violence or Force, especially falling with the Wrist, as it were doubled, and sometimes on the Flat of the Hand, they are beat out of place.

When the Wrist is *dislocated* inwardly, the Hand falls outwards; if outwardly, it inclines forwards; when sideways, which I think is rare, it is discoverable, as those of the other Joints, by the Over-bearing or Rising on the one Side, and the Vacancy of the other: Comparing always at these times, for your farther Direction, the lame with the sound Parts, expos'd, for that purpose, just by.

If the *Luxation* be forwards, having made Extension at the *Metacarp* and Fingers below, with the Counter Extension a little above the Joint, sufficient to let the Bones into their Places, let the Surgeon, with the Flat of his Hand, press the same down thereinto, whilst, with the other behind, he stays the rest from giving way, or hindering the Reposition.

On the contrary, the *Luxation* being backward, the Force is to be made behind, and the Stay before.

Some, at these times in the former, place the Arm and Hand *supine* on a flat Table, and, after Extension, with the Palm of their own, press down the distorted Joint; as in the latter, laying
the

the Hand *prone*; and truly, where these little Bones are started, this Method ought to take place, with the Flat of the Hand bearing hard against them, till they are sunk even with their Fellows, or brought into their first Order; with which, as I have formerly taken notice, it behoves you to be well acquainted, having also the sound Hand lying before you, not only as a Direction in the Work, but ascertaining you also, as well as the By-standers, when the same is rightly perform'd.

Dislocation of the Metacarp and Fingers.

BELOW the *Carpus* stands the *Metacarp*, in as great Order, consisting of four Bones, on a level with each other, or in a streight Line with the *Fingers*, having, in their upper Part, each an Impression to receive the lower *Phalans* of the *Metacarpal* Bones, by a *Synarthrosis*; as at the other, a Prominence entering the small Pit in the first Bones of the *Fingers*, to which they are articulated by an *Arthrodia* in the *Diarthrosis*, as also by a *Syneurosis*, or ligamentous Binding.

The two middle-most of these Bones cannot well start out sideways, being supported by their Fellows so close on each Side; and when flying out, whether upwards or downwards, there is nothing differing in the Method of Reduction from those above: So that we shall proceed to the *Fingers*, which are a sort of *Ginglyonoid* Articulation in *Diarthrosis*, receiving, as we said but now, the *Metacarpal* Bones, and being receiv'd again of those below them, where the Heads and *Sinus*'s, however small, are double, unless in those which are next the Nails.

The

The Thumb differs somewhat in its Articulation, as not being join'd above to any of the *Metacarpal* Bones, but immediately to the *Carpus* and its lower, having only a single Head entering the like *Sinus* of the Bone next to it.

These are also liable to *Luxations*, which are discover'd not only by their Inability of Motion, but the Extremities thereof over-bearing in some Places, and sinking on the opposite. Thus, starting upwards, if you examine the *Internode*, you may both feel and see the Bunching-out, below the Back of the Hand, and the Hollow on the inside opposite; if downwards, the Protuberance is discoverable on the inside below the Palm, and the Cavity forsaken above. The like if sideways, the one Part bearing, the other being sunk.

These *Dislocations* are all reduc'd by the simple Extension, taking hold of the *Finger's* End below, and the *Metacarpal* Bone above; after which, the common *Defensative*, Bits of *Plaster-Compress*, *Roller*, and small *Splints*, as we observ'd at the End of our last *Section*, for the same Bones *fractur'd*, are all that may be farther wanting to the Cure. And, to avoid the great Interruption of your time, being too prolix, as to what relates likewise to the Dressings for those of the *Carpal* and *Metacarpal Dislocations*, by looking back to the same Bones crush'd and broken, you may collect the like, if not the very same *Apparatus*, will serve your present Purpose.

DISLOCATION of the Os Femoris.

Dislocation of the Os Femoris.

WE have now gone through the *Dislocations* of the Bones both of the *Trunk* and *Arms*, and are come

come next to describe those of the lower Parts, viz. the *Thigh* and *Leg*: The former of which Bones, lying so deeply bury'd among the Muscles, creates generally the greatest Difficulty to replace; I mean in its Articulation with the *Coxendix*, or Hip-Bone, which hath a large Cup or Cavity, fitted for the reception of the *Femur*, whose *Epithysis*, or round Head, jutting out beyond its Neck at its upper Extremity, enters therein as into a *Pixis*, or *Box*; which Cup is call'd, by the Surgeons, *Acetabulum Coxendicis*, the Joint affording us the most remarkable Articulation under the *Diarthrosis*, being the first Species thereof, reckon'd up by the Anatomists, named *Enarthrosis*; the Cavity receiving being the largest and deepest, and the Head of the Bone entring, the biggest.

The Edges of this Cavity are also surrounded by a strong and thick Cartilage, which makes the *Sinus* yet more profound; and for the farther Security of this Articulation, besides the Ligament encompassing its Brims, there is another round, short, and strong one, springing up from the middle Part of the Bottom of the *Pixis*, and fast inserted into that of the said *Appendix*, or Head of the *Femur* entring thereinto, and constituting farther a *Syneurosis*, or, with some, a *Neuro-chondrosis*: So that without a Rupture, or tearing asunder of this Ligament, called *Teres*, from its curious, round and smooth Contexture, it seems almost impossible, a compleat or perfect *Luxation* should happen to this Joint; and indeed, considering the Proneness thereof to slip out again, after Reduction, from the *Acetabulum*, we may rather incline to this Opinion: Altho', to deliver my own freely, to the Discredit of the Art, I believe the one half are never replaced; the Bone, after some time, resting among the Heads of the Mus-

cles, there supports itself, tho' lamely, the unfortunate Patient limping his whole Life-Time after.

A certain foreign Practitioner, who calls himself a *Saxon Physician*, in his printed Travels, acquaints us, that we are deceiv'd by a Fracture on the Neck of the *Femur*, the *Exarticulation*, (as he words it) or *Luxation*, being absolutely impossible, at least not so often, falling out, as we believe: 'Whereas, saith he, the upper Part of the Bone, under its Head or Extremity, being slender, and the *Lamina* thereof more brittle, is easily snapt off by some external Force; and altho' the Patient thinks the Pain and Loss of Motion proceed from the disjoining of the Thigh from the Huckle-bone, yet that is a false Notion, and cannot be, that the Articulation can suffer a Luxation, because of the Thickness and Strength of the Ligaments and circumjacent Tendons.' To confirm which, he farther tells us, that he saw a Fracture, and felt it with his Hands, in the dead Body of a Woman, at the *Hospital* in *Amsterdam*, call'd the *Pest-House*, that, in course of Time, had consolidated again, by a *Callus* in the Neck of the right Thigh-Bone; yet the Woman was found, and had the Use of the Part to her dying Day.

Yet notwithstanding our Author is thus positive, I am well satisfy'd, the *Os Femoris* is thrown out of its Socket, both to the outside and inside, as also forwards and backwards.

When flying inwards, which I have met with the most frequently, the Head is to be felt under the *Inguen*, the Leg appearing longer, with the Foot turn'd outward, the Patient being unable to bend his Knee, or join the Thighs together; whereas if the *Luxation* be outward, the Leg will be

be shorten'd, the Foot inverted, with the Heel turn'd out, which set to the Ground, he bears rather upon the Toes.

When it slips forwards, the Head thereof lies on the *Pubes*, and if you press hard on the Muscles of the Buttock, down towards the *Articulation*, there will be felt an unusual Hallow, whence the same is fled; neither can he bend his Thigh, or bring the same towards his Belly, and, contrary to the other, if he tries to stand, he bears upon his Heel. A Suppression of Urine is said also, at sometimes, to accompany this *Luxation*, from a Compression of the *Sphincter Vesicae*.

If thrown out behind, the Buttock will lie up higher, and appear fuller than the other, the Leg shorter; whereas in the last the Inequality is not great, but the Groin downwards feels very hollow, and the whole *Femur* hangs as it were backwards. But as to the Cure.

The manner of replacing the *Dislocation*, either inwards or outwards, is by laying the Patient *supine*, or with his Face upwards upon a Table, in which, for the better Extension or Stay of the Body, a wooden Pin, about a Foot and half long, is fix'd, which is to bear close up the Twist, or against the Groin on the same Side: Then fastening a strong Towel or Napkin about the Knee, with another below, a third being beforehand put up to the Groin, round about the Hip, against which the Pin aforesaid is to rest; after which, taking fast hold of the Ends of the said Towels, the Extension, as also the counter Extension, is begun, by several strong Arms, whilst one likewise, at each Armpit, may farther the same, not only steadying of the Body, but augmenting the counter Stretch where it is wanting: During which, so soon as the Surgeon perceives

the Bone moving out, let him take his Opportunity, giving Order to the Extenders below, suddenly to lift up the Patient's Thigh towards his Belly, pressing with his Hands, either to the Right or Left, as the Situation of the same requires, and therewith force back its Head towards the *Acetabulum*, whereunto it will, slipping over the Tip of the Cartilage, snap sometimes with a loud Noise.

But supposing the *Processus*, or Prominency, lock'd under the *Glutei*, or Muscles of the Buttock, the former Posture is to be revers'd, and the Body laid prone, in like manner, or on the Face, the Pin rising up, on the side of the Twist, whilst, after suitable Extension as before, the Surgeon, lifting up the *Femur*, or Thigh-bone, or rather giving Orders to the Extenders so to do, with his Hands presseth down the Head into its Seat aforesaid.

The like where it is forc'd to the outside, the Extension, Elevation and Pressure, being made to the contrary, that the Bone may be more certainly and securely conducted to the Cavity it was flown from; in which nothing but a right and due Knowledge of the *Skeleton*, in its several *Articulations*, assisted also at the same time by a diligent Comparison of the Limbs, the sound with the lame, can, as we have already more than once observ'd, render you compleat or dexterous in this Part of your Profession.

Where the Extension by the Hand proves insufficient, the *Tackle* and *Pullies* are wanted, to supply the Deficiency thereof; notwithstanding which, tho' some very eminent Practitioners have been concern'd therein, I have more often known the *Dislocations* of this kind still left unfinish'd, than those of the *Humerus*, or *Shoulder-bone*.

An *Ostler*, at the *Red-Lion* in *Red-Cross-Street*; a young sprightly Fellow, being thrown from his Horse, in the Fall displaced this Bone; finding himself unable to stand upon his Leg, he was carry'd up to his Chamber, and put into a Bed: after which they sent for me, who, upon Examination, plainly felt the Head of the Bone in the *Inguen*, and the Cup or Cavity of the *Coxendix* forsaken by the same.

In order to its Reduction, I called for the Assistance of three strong Fellows, at that time in the House; and, happening in his Neighbourhood, I sent also to Mr. *Richard Bateman*, then living just by, but he being from home, his Servant came to me. I then ask'd for several strong Towels, one of which I drew up between his Legs, close to the Groin, but clear of the *Tessis*, each End of which was committed into the Hands of two of the Assistants before-mention'd, in order to a counter Extension; to two others, plac'd one above, the other below the Joint of the Knee, two more; and, as a farther help to the counter Stretch, others were call'd in, who under each Arm were to draw up the Trunk, and keep the Body from wriggling out of the way.

Being thus set at their several Posts, and all things provided I had occasion for, as the Patient lay rather on the sound Side, kneeling on the Bed over him, I clapp'd my Arms high up under the fleshy Part of his Thigh, ready for the Work, and giving Orders for the Extension to be begun, both above and below, as I found the Bone to move, with my Arms, as aforesaid, I lifted it again to its *Acetabulum*, where it slapp'd in very loudly, and perceptibly to us all.

After this I apply'd a large *defensive* Plaister round the Hip, with Bolstering in the Hollow of

the Twist, and roll'd him securely up: The rest being Nature's Work, only directing him to lie still and quiet, and confining him to his Bed for a Month's time, which was not but with great difficulty comply'd with; for finding himself so perfectly easy, eating, drinking and sleeping as well as before, having Youth and an excellent well constituted *Temperament*, he had no notion of the necessity of such Confinement; and, unknown to me, had got up at the Fortnight's end, of an Evening, drinking and playing at Cards with his Companions. At above five Weeks end, coming into the Yard, I saw him in the Riding-place, laying his Hand upon a Horse's Back, leap upon the same; which he told me (and reasonably) was much easier to him, than mounting by the Stirrup; in which, the Heel making an Angle with the Hip, the Head of the *Femur* is brought out nearer to the brims of the Cartilage, and in greater Danger of slipping over the same, by stretching of the *Teres*: Nor did he, as I could hear, ever make complaint of a Weakness in the Joint after.

This Case, with two others, in one of which, the Head of the *Femur* was beat backwards, I do not blush to own, have been the only successful Enterprizes of this nature, in which I have been myself, as Principal, concern'd, which were all too perform'd singly by the Strength of the Arm, or without any other Instrument.

I have indeed assisted others, who have some of them likewise succeeded, but for the most part miscarry'd in the Work; the Bone falling out again through Relaxation, if not a Rupture of the Ligament before describ'd, and the Patient's Case after not to be retriev'd. I remember also where there were four Surgeons of us together, with

with other Assistants at the *Tackle*, when, so soon as the Fibres began to be extended, the Muscles of the whole Limb were so universally convuls'd that our endeavours at the *Jack*, being render'd fruitless, by the spasmodick Contraction of the same, we were forc'd to desist, and leave the Bone nesting close to the *Pubes*, where we found it: Proceeding now,

As we instanc'd in the *Dislocations* of the *Humerus*, at sometimes arising from a gradual Congestion of Humours round about the Joint, and loosening the Ligaments thereof; so here also the like Misfortune happens, and that I think more frequently than above, particularly in *Strumous* Habits; and more especially when some cold or phlegmatic Humour, seated upon the Hip, and stiffening its Motion, is taken for a *Luxation*, countenanc'd the rather by some Relaxation of the Ligament, by which that Leg appears perhaps a little longer than the other; which, together with the preternatural Fulness round the Joint, confirms that Suspicion: And now some roguish pretending *Bone-setter* going to work, and haling the Limb, under pretence of setting the Bone, a new Fluxion of Humour is stirr'd up, and an *Abscess*, or *Apostemation*, at length ensues, by which the Ligaments long steeping in Matter, are farther relax'd, and the Head of the Bone really falls out of the Cup: At length the *Abscess* breaking, or being open'd, by the continual and large Discharge, an *Atrophy* comes on, and the Patient miserably pines away under a *Marasmus*; as we have taken notice elsewhere, in discoursing of the *white Swellings* upon the Joints, in our second *Section*, among the *Strumous* Symptoms.

If such Accident is fear'd, and takes its rise from a meer Debility of the Joint, as in weakly

Dislocati-
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gestion of
Humours.

and *ricketty* Children, whose Ligaments and Muscles are over lax, and where there is no Humour congested round about, the cold *Immerfion*, or plunging the Patient frequently in cold Water, by giving a new Spring to the Fibres, invigorating the Tone of the Blood, and procuring a due Tensity to all the Parts in general, is, if I mistake not, the most serviceable Remedy upon these Occasions.

DISLOCATION of the Knee.

Of the
Knee.

THE next Joint we come to is that of the *Knee*, fram'd of the lower *Appendix* of the *Os Femoris*, which hath two small *Processes*, with a *Sinus* in the middle, to receive a Prominence in the *Tibia* below it, to which it is also fasten'd by a Ligament, and the upper part of the said *Tibia*, which has two superficial *Sinus's*, made by so many Cartilages fix'd on its *Appendix*, and excavated for the reception of the *Processes* before-mention'd; so that here also we have a *Ginglymus*, *Syneurosis*, and *Arthrodia*, under the *Diarthrosis*.

Besides those, for the farther strengthening of this Articulation, just before the Extremities of these Bones, I mean the lower of the *Femur*, and upper of the *Tibia*, is plac'd the *Patella*, or Knee-Pan, which, on its inside, is receiv'd by the smooth, cartilaginous Surface of the *Appendix* of the *Os Femoris*, and thereto join'd by *Syntenosis*: being capp'd as it were, and fasten'd down, by the tendinous Expansion of the Muscles, we took notice of in the *Fractures* of this Bone; whose use seems principally to secure the Joint of the Knee from being *luxated* forward, in our descending steep Places, or going down Stairs: Yet notwithstanding it sometimes happens, that both the *Pa-*

tella,

tella, as well as the Joint of the Knee it self, are liable to be displac'd, though the latter seldom other than by a *Semi-Luxation*, whether before, behind or sideways.

If the *Luxation* be forwards, as the Patient lies along, let your Extension be made by the Hand, or a Napkin fastened above, with another below the Joint, whilst seeing your Opportunity, with both your Hands, you sink down the prominent Part, and resettle the same in the *Sinus* it slipp'd out of: And if this Extension by the Hand suffice not, the *Pully* is to be made use of; tho' I have never met with the occasion at these times.

When it is beat out backwards, you will find a Protuberance behind in the Ham, with a Falling-in before on the *Knee*: In order to the rectifying which, the Patient being set upon a Chair, or Stool, well supported on each side, the Extension made as before; whilst the lower Extender goes about to bind the Leg, with your Hand behind upon the Prominence, you are to force back the *Condyls*, or started *Processes*, into the *Sinus*; they had so lately abandon'd; or, placing both your Hands under the Ham, as you stand over him, forcibly lift up the same.

Another way of reducing this *Luxation* is, whilst the Patient is supported on his sound Leg, with his back towards yours, having taken the lame one between your own, you press one of your Hands on the prominent part in the Ham, whilst with the other you raise the Leg up towards his Buttock: But, I think, you may as well have your Face towards his Back, and whilst an Assistant raiseth the Leg, in the manner aforesaid, with both his Hands, you may have also yours at liberty,

liberty, as you find occasion, to depress or drive back the Bone.

For the same purpose, a *Girth* or *Strap* is also plac'd upon a Bolster in the Ham, when taking up the Leg in your Hand, whilst, with your Foot forwards upon the *Girth*, you draw up the same, you may more easily perform the Work.

In the lateral *Dislocations* of the same Joint, if the Bones are forc'd inwards, the Prominence, or unequal Rising, will appear on the same side, and the unusual Vacancy on the outward; and so contrarily, if beat outwards, the Rising will be found there also, and the Vacuity inwards: When accordingly making suitable Extension, unless the Joint be very full and large indeed, and the Muscles through Pain under the Power of Contraction, you will sometimes find it no very difficult matter, the *Processes* being small, and the *Pits* superficial, with your Hands compressing on each side, to direct the started Bone to its former proper Situation.

In these *Luxations* it is best, I think, to have the Patient out of bed, at least sitting at the feet thereof, well secur'd by one on each side, in such manner that he may be staid, during the Extension and Flexion of the Leg; and in the lateral *Dislocation*, you may put his Leg betwixt your own, as you stand facing him, an Assistant behind you, taking fast hold thereof, makes the lower Extension; at which time, whilst another pulls at the Thigh, with your Hands on each side of the Joint, and the inside of your own Knees close also to your Hands, by a Force thus united, you may more readily dispatch what you are going about.

DISLO-

DISLOCATION of the Knee-Pan.

WHEN the *Patella* is displac'd, you are also ^{Of the} with your Hands to force the same back, whence ^{Knee-Pan,} it is fled, to its former Station, either gently or suddenly stretching out the Leg, as you perceive most likely to answer the Intention; when, arriving near its Center, you will find a Flexion of the same, or, lifting up the *Knee*, with your Hand under the Ham, will not only facilitate the Reduction, but prevent the slipping over of the Bone to the contrary side, whilst its lying easily along is the best Posture to move it first out of the place it is flown into, which is most commonly towards the upper part: And here once again, as a farther Direction for the Resettling, you must have the well Leg uncovered before you, that, by carefully scrutinizing each, and duly comparing them in the same Postures, you may be the better assur'd your Business is well done.

I think I need not mention any thing of the Dressings, which have so little differing from those in the *Fractures* of the same Parts, observ'd in our foregoing Section.

DISLOCATION of the Ankle.

THE *Ankle-Joint*, or *Tarsus*, is the Conjunction ^{Of the} of the lower *Appendage* of the *Tibia*, whose ^{Ankle.} *Processes* on the inside is nam'd the *Maleolus Internus*, as that of the *Fibula*, its Companion on the outside, *Maleolus Externus*, and the upper part of the *Talus*, or *Astragalus* lying under it.

For the *Tibia*, at its Extreme below the place, where it receives the *Fibula*, has a Cavity as it were divided by a little Rising in the middle, receiving

ceiving the prominent part of the *Talus*, as aforesaid, by a *Ginglymus* in *Diartrosis*, or that Articulation which is for manifest Motion: It being on this Bone that the Foot is mov'd upwards and downwards, or bent and extended, and from whence by outward Force, it slips off, as well backwards, forwards, and sideways.

If the *Luxation* happens inwards, the Sole of the Foot is turn'd outwards; as it is inwardly, where the *Luxation* is outwards.

If thrown backwards against the great Chord or Tendon of the *Gastrocnemii*, the Foot appears much larger, and the Heel is lost; as the former is shorten'd, and the latter lengthen'd, when started, or thrust forwards, upon the Bones of the *Tarsus*.

The Manner of *Reposition* of this *Dislocation* is after due Extension at the Small of the Leg, and round about the Instep, the sound *Ankle* lying also to compare with, to press back the prominent part by the way it slipp'd out, and after, by good *Compress* and *Bandage*, to prevent its flying thence again; for there are some People so very feeble in these Joints particularly, that the treading upon a rugged or uneven Stone in the Streets, shall immediately throw them half out, occasioning a *Subluxation*, and at the same time the Bone snaps in again of itself; and they make a shift, tho' very lamely, to hobble home again.

I have frequently been sent for upon these Accidents, and discovering a vast puffy *Tumour*, or *Echymosis* upon the Part, have been sometimes jealous there has been a *Dislocation*, till, coming to examine the several Motions, I found all safe only embrocating the Part, *cum Ol. Rosar. ac tartarillo Acet. vel cum Ung. Sambuc.* and laying on a *Defensative ex Diapalm. Bolo, &c.* with moderate

Bandage

Bandage above and below the Joint: If there has been great Pain, bleeding also in the Arm; ordering moreover a spare Diet, with Confinement to the Bed or Couch for some time, till the *Tumour* being dispersed, and the Fluxion gone off, I recommend a *Cerate* in the room of the *Defensive*, to strengthen the Ligaments: And for some, who have been after subject to the like Accidents upon every light occasion, a *lac'd Sock* or *Stocking*, which has been found serviceable.

But if the *Luxation* be compleat, the Accidents ensuing are often of bad consequence, not only from the Proneness of the Bones (whose *Processes* and *Sinus's* are so shallow, and the Weight they stand under so great) to fly out again; but by reason of their Ligaments and Tendons thereby distorted, great Pain and Fluxion are apt to arise; so that they want not only the same Rest, but as strict *Regimen* as those of the larger *Articulations*; and, after your best Endeavours, it will sometimes happen, that inevitable Lameness, or a limping Gate will ensue for a long time, if not always after.

A *Brasier*, in my Neighbourhood, of a strong Hist. 55. Habit of Body, and corpulent, in leaping a Ditch that was very steep, pitch'd with one of his inner *Ankles* so doubling under him, and withal bruis'd against a rugged Stone in the Ground, that, by the excessive Pain, being unable to rise up again, he was therefore carry'd by his Friends to a House in the Town adjacent, in which he lay all Night; the Accident befalling him several Miles from Home, where he was brought next Day, and a *Surgeon* sent for; who, discovering the *Maleolus Internus* thrown out of its Place, attempted, but to no purpose, the Reduction; the *Tumour* being very great, and the Skin on the outside, either by
the

the Force of the Contusion, or improper Management in the Country, tending to mortify; which, when a second Surgeon was called in, they fomented, having first scarrify'd, and dress'd up with *Theriaca*, in the form of a *Cataplasm*: Yet, notwithstanding all their Endeavours, the same spread to the compass of a Palm, and, throwing off some few Days after, left the whole *Apophysis* of the *Tibia* naked, protruding out of the *Ulcer* to a great distance: A Case indeed so formidable, or of so threatening a nature, that the Surgeons thought it necessary to call in farther Help, and Mr. *Blundel* with myself were desired to visit him.

Upon strict Enquiry, and Inspection of the Joint, we found the lower *Appendage* of the *Tibia*, that locks in the *Talus*, broken off, and the Bone so thrown out of its place, that there was no likelihood of its Reduction, or ever after keeping it so reduc'd, the Ligaments being all torn, and lying round about in Sloughs, with the Bone also uncover'd, and standing out of the brims of the frightfully gaping *Ulcer*.

After withdrawing into another Room to consult, when we had maturely weigh'd all Circumstances, we concluded the best Way was to dismember, before some *Abscess*, threatening from above, came on, and his Spirits were farther exhausted; and this we delivered to the Patient himself, in the mildest Way we could, as our joint Opinion, assuring him the Danger was as great by keeping of his Limb on, as by the *Amputation*, with a speedier Cure, if he surviv'd the Operation, as there was reason to think he might, by the one Half: and consequently, all Things consider'd, infinitely less Trouble and Pain also, than he must expect in the laying open *Apostema-*

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tions, use of *Escharotics* and *Cauteries* to the fungous Ulcer, as well as to the Bone; with the Fatigue hereof for long time, and the Hazard at last of his sinking by the great Discharge, before an Ulcer of that kind could be brought to a firm *Cicatrix*: Or admitting that accomplish'd at the Year's end, the Unlikelihood of such a Limb to support him so well as the artificial.

Having paus'd a little while, he seemed to give way, and we left him a Day or two to consider thereof: When, in our absence, a certain *empirical* Practitioner, for nothing so remarkable as a bold Assurance, was called in, who made a Pisth at the Case; saying, in his romantic Way, he had cur'd twenty worse Legs than this; and that there was no occasion for cutting off the same.

Upon which the Surgeons, who had been first consulted, perceiving, after several Months Attendance, that there was little or no prospect of any end thereof; the Heel likewise mortifying, and the *Os Calcis* growing carious, with *Apostemations* one ensuing another, which were laid open up to the Calf of the Leg; the poor Patient by a *Marasmus*, as we had foretold, reduc'd from great Bulk to a *Skeleton*, covered over with little more than the Skin: These Gentlemen, I say, withdrew, finding him still oppose the taking off the Leg, and made way for another, who promis'd greater Matters than the first ever pretended to: When thus struggling and languishing for a Year and half, I saw him got down Stairs upon two Crutches, and since, many Years now past, in a poor lame Condition, as he must continue for his Life-Time.

DISLOCATION of the Tarsus, Metatars and Toes.

Of the
Tarsus,
Metatars,
and Toes.

BEFORE the *Talus* stand the Bones of the *Tarsus*, the first of which, called *Naviculare*, has a *Simus* receiving the prominent Head of the said Bone, which on its two sides is encompassed by the *Processes* before mentioned, of the *Tibia* and *Fibula*, constituting the *Maleoli*.

'Tis by this Conjunction of the *Talus* with the *Naviculare*, which is an *Artbrodia* in *Diarthrosis*, that the Foot has its lateral Motion: But, before we proceed farther, 'tis necessary we take notice of another called the *Calx*, or Heel-Bone; the upper part of which, lying under the *Talus*, is therewith articulated by a *Ginglymus*, both receiving and being again received.

To the posterior, or backward Extremity of this Bone, is fastened the great Tendon we mention'd before, made up of the Termination of the *Gastrocnemii*, or *Musculi Extensores Pedis*, called by some the *Tendo Achillis*, from the Story of the ancient *Poets*, who feign *Achilles* to have been invulnerable in all other Parts of his Body: But his Mother holding him thereby, when she dipped him in the River *Styx*, this Part escaped the sovereign Preservative; and he lost his Life after, by a Wound inflicted thereon: Quitting the Fable.

The fore part of this Bone is joined to one of those of the *Tarsus*, called *Cymbiforme*: But now returning to the *Os Naviculare*, which, we told you, on its back-part received into its Cavity the Head of the *Talus*: On its fore-part there are three little Prominences, entering as many shallow Pits, or Impressions, of the three *Ossa Cuneiformia*.

metatarsalia, making an *Artbrodia* in the *Synarthrosis*; which, with the *Cymbiforme* before observ'd, lie in a Range connected by a strong *Syneurosis*, or Ligament.

These Bones being seven in Number, viz. *Astragalus*, *Naviculare*, *Calcis*, *Cymbiforme*, and the three *Cuneiformia*, make up that Part of the Foot we call the Instep, which are liable to be displaced both upwards and downwards, those standing in the middle, and those on the outside laterally also: But there being nothing remarkably differing, either in the Reduction or Dressing, from those of the *Carpus* above related, no more than there is also between the *Metatars* and Toes, and the *Metacarp* with the Fingers, at the same time remark'd, as to require a farther Enlargement thereupon; we shall content ourselves in having thus laid down their *Osteology*, or anatomical Description, and close this *Section* with the following Caution.

That if in attempting to reduce a Bone *dislocated*, having made great and painful Extension, you miss your aim, and are disappointed, you are by no means to meddle again therewith next Day, or perhaps for two or three afterwards, but to wait till the Fluxion of Humour, owing to your former Extension, is taken off; bleeding your Patient, and embrocating the Limb cum *Ol. Rosar. vel Sambuc.* after which, the Tumour subsiding, and the Excoriations, if any, healed up with your *Epulotic*, the *Ol. Lumbric. cum Ung. Dialib.* or the lubricating *Axungia's*, in order to mollify and relax the muscular Fibres, that they may more readily give way, when you enterprise the Work a second time; being provided of more Help, and better Instruments, at least the same more dextrously manag'd.



S E C T. X.

Of some DISTEMPERS overlook'd in the foregoing, and incident more particularly to the Female Sex; as Tumours and Apostemations from Milk, soon after Delivery: With others arising from the untimely Stoppage of Child-Bed Purgations, Falling-down of the Womb, &c. also of the Prolapsus Ani.

W H E N I had taken a Review of the preceding *Sections*, I found I had omitted certain *Diseases* peculiar to the *female Sex*; as in particular among the *Tumours*, those arising from *Milk* suddenly, and in great abundance, after *Delivery* from *Child-Birth*, flowing into the *Breasts*, there at some times exciting *Tumefaction*, *Inflammation*, and *Abscess*.

Besides which, there are others also happening at this time by some ill Management, as getting Cold, or the like; whence the *Child-Bed Purgations*, call'd *Lochie*, being untimely stopp'd, and the *Blood* thence imbued with a malignant Quality, either *Stagnation* of the same, with *Mortification* of the *Parts*, ensues, or at the best *Apostemations* and *sinuous Ulcers* hard of cure.

Again, they are moreover subject to a *Prolapsus Uteri*, from the Relaxation of the Ligaments, suspending

suspending the same, which frequently take their Rise from hard Labours, and other Weaknesses of *Fluors*, both *white* and *red*, incident to the Sex.

Galen, I think, makes them an hundred-fold more miserable than Man, on the account of such, or greater number of Maladies, arising some how or other from the *Womb*.

But leaving these to the *Physician*, we shall here only touch upon the above-mentioned, which will compleat our *Decade*, and shall begin with those occasioned by the *Milk*, so far as affecting the *Glandules* of the Breast, and there raising a *Tumour* with Pain and Fluxion.

'Tis generally supposed, that, after Delivery, the *chylous* or milky Juice, which I take for the same thing, being no longer wanted for the use of the *Fetus* now excluded, is transmitted to the *Glandules* of the Breast, for nourishing thereof, as before it had been supply'd by those of the *Placenta*, adhering to the *Uterus*: But truly, how it subsists therein, whether on this or other Juices, or 'by what Passages the same are convey'd thereto, is a Disquisition foreign to our present Subject, and has employ'd the Ingenuity of several great Men.

However this may be, it is incontestable that the *chylous* Liquor, we call *Milk*, before it is *sanguify'd*, or turned into *Blood*, being separated therefrom, (as usually conjectured) in the Circulation by the *Glandules* of the Breasts, and thence, by the *Tubuli Lactiferi*, convey'd to the Nipple; whence, lastly, it is suck'd into the Mouth, is by Nature ordained for its Food, till it is capable of more solid Nourishment.

Nor does it belong to us to solve that intricate Contrivance of hers, at this Juncture furnishing such Quantity of the *Chylous* Juice to these Parts,

differently from what happens at other times, any more than whether or no there be any secret Passages, not yet discovered, for the readier Conveyance thereof to the Breasts, than in the common Way of Circulation, by the *Thoracic* and *Mammary* Arteries? where, not being yet assimilated thereunto, it is, as but now observed, secern'd by the *Glandules*, the rest returning, by the Veins, to the Heart.

These *Phenomena* are not, I say, our Task to discuss, who are not only to prevent, what we can, Mischiefs arising from the too copious Afflux thereof, and to obviate its Stagnation in the said *Glandules*, with the Consequents thence arising.

'Tis certain almost every Woman, presently after her Delivery, finds great Increase of this Fluid, we call *Milk*, into her Breasts, by which the Kernels are first of all fill'd, and from thence the *Tubes* likewise distended; a farther Supply of which still coming on, great Tension must needs arise with Pain and Induration; so that, unless it finds a way of exonerating or emptying itself, by the *Ducts* terminating at the *Mammilla*, or Nipples; the whole Breast being thus put upon the utmost stretch, is incapable of receiving more; and if the Plenitude be not abated, either by the drawing thereof, which is still hazardous, or absorbed by the Veins, as other Extravasations, and convey'd back again into the Blood, an *Abscess*, or *Apostemation*, frequently ensues.

Of ABSCESSSES from Milk.

Of Abscesses from Milk.

THIS Disturbance happening generally on the third or fourth Day, raiseth what we call commonly the *milky Fever*, causing great Disturbance in

in the Blood for some Hours, till a *critical* Sweat breaking forth, the Turgescency goes off, and the *Fever* ceases; The *Glandules* likewise and the *Milk-Pipes* being now dilated, what follows afterwards placidly moves on, and, if no Mistake be committed, is for the most Part kept under by the Infant's Suction, till the Time of *Ablactation*, or Weaning, as our Women call it, when it usually slackens and disappears: Or the Mother again conceiving, provident Nature now standing in more need of the Supply, for the Nourishment of another *Fœtus*, withdraws the former to the Place where it is more wanted: Returning again from this Deviation to our Subject.

In order to prevent the Disturbance hence arising, so soon as, or indeed some Weeks before, the Woman is brought to bed, she should determine whether or no she intends to suckle her Infant; and if she resolve not, she may wear Plaisters upon her Breasts, moderately drying and restraining, such as the common *Diachylon*, or equal Parts of that and the *de Minio*: She is likewise before, but more especially after her Delivery, to avoid the ingurgitating large Quantities of thin, serous and attenuating Liquors; observing regular Discipline also in her Diet, which although sufficient for the Sustenance of herself and the Charge she carries, yet not to the indulging any such Excesses as may accumulate superfluous Juices, apt to excite a Ferment in her Blood, and overload the Vessels.

Some propose the wearing likewise of a Wad of Tow, press'd out of warm *Oxycrate*, in the Armpits, with a view thereby of moderating the Course of the same into these Parts.

But after Delivery, whatever she did before, it behoves her to be wary, and to take care she

commits no Error, or be over busy with Applications too cold, or repercussive, lest a *Coagulum* be thereby induced, and a *Schirrus* brought on, or at the best inevitable *Abscess*, or *Apostemation*: Nor on the other hand must she suffer them inadvertently to be drawn, unless, through Plenitude of the milky Liquor, the same also voluntarily flowing forth, she is put upon it for present Relief: For since her design is not to give suck, she will hereby only make way for farther Influx thereof to these Parts, where she wants to get rid of it.

Let the *Surgeon* therefore be timely consulted, if there seem occasion for his Help, who may in the beginning apply afresh one of the foresaid Plasters; giving a strict charge that she be, as aforementioned, sparing in her Liquors, above all taking care of the cold Air, or too early rising out of Bed; in which a free Perspiration by the Pores is to be promoted, that may keep under the Fullness of the Vessels, and carry off the feverish Ferment rais'd thereby: Observing farther, at the Peril of her Life, that she by no means check her Purgations, so absolutely necessary to her Preservation: And if, notwithstanding your *repercutient* or *discutient* Applications, the Swelling still increases and indurates, growing also painful, you are to add some gentle *Emollient*, such as the *de Minio* run down with a little *Ung. Dialib.* or the *Cera Flava*, *cum Sperm. Ceti.* ac q. f. *ejusdem Ung.* also the *Empl. de Mucilag.* or the *Diagalbanum* of *Bates*.

I have sometimes, in the beginning of these Disorders, successfully apply'd folded Linnen-Cloths, wrung warm out of an *Aq. Calcis*, being shifted Night and Morning: But if the Pain increase with Inflammation, an *anodyne Cataplasma* must be apply'd, *ex Mica Panis in Lacte*, or a Decoction

coction ex *Flor. Sambuc. Chamomel. & Fol. Rosar. in eadem cocta, & Farin. Fab inspif.* embrocating the Breast first of all cum *Ung. Sambuc.* or mixing some of the same with the *Cataplasm* before you lay it on: When the Symptoms still encreasing with Pulsation or Throbbing in the Part, especially if Matter seem perceptibly to fluctuate under the Fingers, and the *Tumour* grows prominent, you are to forward *Suppuration*, as we have in our First *Section* advis'd for the *Pblegmon*: This being indeed no other, and the Indications therein to be observed by the Surgeon, are here likewise the same which we have there laid down, that is, to suit the Applications to the present Condition, or State of the *Tumour*: For if you apply *Emollients* at the beginning, by relaxing the Parts, you encourage and make way for the larger Fluxion; if *Discutients*, by rarifying or attenuating the Humour, you not only promote the same, but, by breathing for the more subtil Parts, leave the rest to indurate in the Glands, and turn to a *Schirrus*: The like Mischief may acruce by the untimely, too late, or over long Continuance of repelling or *restringent Topics*, which lock up the said Humours, and, fixing them in their Channels, endanger Stagnation of the Juices, and bring on *Abscess*, or *Apostemation*.

But we have said so much of this, as to the framing your Remedies to the Nature of the Swelling, and State of the Inflammation attending, when discoursing of that *Tumour*, as to render any Enlargement thereupon, I suppose, needless: So that referring you thither, if wanting farther Instructions, I shall only give you an Instance or two of this kind, where I met with more than ordinary Difficulty.

HIST. 56. A young Gentlewoman, in few Days after her Delivery, or at the Time of her *milky Fever*, getting cold, as she apprehended, was seiz'd with *Rigours* frequently returning, after which she began to complain of one of her Breasts; for which, by the Perswasion of her Midwife, she anointed the same with the *Ung. Populn.* and *Spir. Vini*, their usual Applications at all times: But the Fluxion still encreasing, with large *Tumefaction*, *Tention* and *Inflammation*, I was consulted, and found the Glands of the Breast very much obstructed by the Afflux of Milk coagulating therein, and threatening *Apostemation* in the upper Part, together with large *Induration* throughout the whole Body of the Breast, which upon handling was very painful: However, no Matter being as yet made, at least perceptible, I directed first of all the *Pultis* above-mentioned, *ex Flor. Chamomel.* &c. putting the *Mica Panis* in Place of the *Farina*, to be laid over the whole Breast, having first well embrocated round about *cum Ung. Sambuc.* She was kept low as her Fever required, and drank sparingly of Liquors, observing they always encreas'd her Pain, by running presently, as she express'd herself, into her Breast.

When finding, after a second Application, no likelihood of discussing the Humour, I chang'd it for that *ex Ficubus & Lillii Albis*, described for suppurating the *Pblegmon* that way tending, and which soon after promoted the Maturation already begun, in the upper Part, where the *Tumour* now seem'd to rise up in a Cone, and the Matter after appearing sensibly to fluctuate, I laid a Bit of *Caustic* through a Perforation made in a Plaister for that Purpose, and in the Evening let out the same, which was of itself ready to burst through before the Application.

Yet

Yet notwithstanding this Appearance of a thorough *Suppuration*; after the Discharge, I found the *Apostemation* was but superficial; the other Parts of the Breast continuing still hard and painful, with its *Glands*, particularly the larger under the *Mammilla*, much more so.

Upon Separation of this *Eschar*, I found a *Sinus*, that was however but *cutaneous*, running higher up towards the *Clavicle*, this I laid open, here being no prospect of Union by *Compress*, of which the Part was incapable; and whilst I was detaching the Wound above with the *Precipit.* and *Lignum. Arc.* as it was near upon healing up, I perceiv'd *Matter* making way through the Flesh, seeming to arise from that large and deep *Gland* below in the Body of the Breast.

Dilating the Orifice with a Bit of *Gentian-Root*, and the Day following, passing down my Instrument, I found it running deep under the said glandulous Body, and, by pressing the Breast gently upwards from below, the *Matter* began to rise daily in great quantity, after extraction of the Root intruded, and which now choaked in the same, till let forth at the times of Dressing: So that observing no likelihood of bringing about her Cure this way, and finding it impracticable to lay open the *Sinus*, I directed a Silver *Cannula* to be made, with suitable Pipe and flattish Rim, which I enter'd readily; the *Matter*, as it rose up freely emptying it self thereby, to the Patient's Satisfaction: Nor did I expect more from this Way of Dressing, unless greater Ease to my Patient, than the other, the Situation of the Orifice being above, and so not favouring the Discharge of the *Matter*, otherwise than it rose up and overflow'd: The Cavity also lying very deep, and her utmost Desire being only to be freed from Pain;

Pain; the very mentioning of dilating giving occasion to withdraw herself from me: When having try'd another Gentleman of the same Profession for some Weeks, and again discharg'd him, she sent for me a second time; her Pain being much encreas'd by throwing out the Pipe, and giving her, I suppose, a fresh Alarm.

I was not at all concern'd that the *Cannula* had been left out, which was intended only to *palliate* for some time, till I could convince her of the Necessity of taking other Measures; endeavouring to choak in the Matter, and to try to put the Breast upon *apostemating* in some other more depending Part, commodious for emptying thereof.

To this end, I thrust in a Tent of Lint, roll'd pretty tight, and thereby fill'd up the Orifice, with an adhesive Plaister on the outside; also a large one of the *Mucilages* encompassing the whole Breast, on account of the great Induration all round, and intending not to move these Dressings for two or three Days; but before such time was expir'd, the *Matter* being much encreased, as was to be expected, with *Inflammation*, my Patient grew impatient; and the second Night, finding she could have no Rest, her Nurse and she together, taking off the sticking Plaister, the upper part of the Tent adhering thereto was also at the same time extracted, and great quantity of Pus pouring presently out, upon which growing easy, she pass'd the rest of the Night in quiet.

When I came the next Morning, and was inform'd what had been done, I told her plainly, If she would not give way to what I had thereby propos'd, it would be to no purpose for me to give farther Attendance; endeavouring once more to convince her, that till we had an Orifice, that

might

might favour the emptying of her Breast, she might be in the same Plight, if not much worse, through a hectic State, half a Year after, as she then was, and as far from her Cure. When finding her not so pliable, as I expected, to my Proposal, I had now Thoughts of leaving her, as before she had withdrawn from me. However, taking a View of the Breast, at this time, I perceiv'd the *Matter* still running out, and entering my *Probe*, which, without any Pain given her thereby, had an easy admittance through the Body of that large *Gland*, with my Fingers of my other Hand, at the bottom on the outside of the Breast, though at some distance, I could feel the Extremity thereof; so that drawing forth my Instrument, after much Perswasion, I prevailed once more to choak up the old Orifice at the top, promising to be with her the next Day, if she could not longer dispence with the Disturbance, or till the *Matter* was sunk lower, and should shew it self in a fitter Place for the Discharge, as aforementioned.

Visiting her accordingly, though towards the Evening of the next Day, she complained exceedingly of her Pain, the Breast appearing full, and again inflamed as before; yet giving her farther Encouragement of her being quickly well, and the great Likelihood there was of obtaining our Desire, could she hold out a few Hours longer, I left her without moving the Dressings, with a farther Assurance that I would return to her early the next Morning: But her Courage, it seems, failing, or her Pain surmounting, knowing it was in her Power to ease herself, if I refus'd, she called me up early the next Morning, ordering the Messenger to acquaint me, that if I would not come away presently, and let out the *Matter*,

Matter, she would pull out the Tent herself, let the Consequence be as it would.

In this Interim, I had given Orders for a large Steel-Instrument, a little bent, flattish and pointed at one end, having an Eye at the other, like the *Seton-Needles*, into which I had drawn about half a Dozen Needles-full of stitching Silk, defending the Point with a Bit of Plaister.

Taking this along with me, in about an Hour's time I went to see her, and found her, with a large Bason at her Breast, letting out the *Matter*; under the Discharge of which, together with the Pain she had undergone, she seem'd ready to faint.

Hereupon, unwilling to lose the Opportunity, with my *Probe*, as usually, in my Hand, as if going to pass the same, whilst my Patient was thus leaning upon her Nurse's Arm, with her Head, in a sort of *Deliquium*, or *Lypothymy*, I chang'd my *Probe* unheeded to them both, and, concealing the Silk in my Hand, pass'd down the Steel one, and forc'd the same through with very little Complaint, having kept them ignorant of what I had done, till I had drawn my said *Flammula* through also.

Nevertheless, so intricate was the *Sinus*, and the *Matter* so bedded as it were in the Body of the *Gland*, that it was several Days before it found its way out by this Orifice at the bottom. However, leaving out the Tent above, and anointing the *Flammula* with my *Digestive*, for its freer Passage up and down, she continued easy, and soon after, ceasing to run out at top, it came at length to discharge it self the Way intended, which I now somewhat dilated, for its readier vent, by a fine or thin Piece of the *Gentian Root*, thrust up between the Silk; whence in few Days, being

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being still farther enlarged, there was made so compleat a Drain, that soon after cutting out the Silk, I permitted the upper Orifice to heal up, putting a *Cannula* of sufficient length into this lower, which was continued some time longer for Prevention, or 'till the *Matter* ceased here also to flow out, the Breast being now covered with the *Emplastr. ex Ammoniaco*, by which the Induration gradually resolved; so that, laying aside the *Cannula*, and putting up a soft easy Tent, dipp'd in the warm *Liniment*, and daily lessening the same, this lower Wound also was healed, and her Cure compleated.

A Case of the like nature, after more than twelve Months successless Endeavours of many *Doctresses*, famous for the Cure of *sore Breasts*, as also of some others, was soon after recommended to me: Upon the Examination whereof, finding several Orifices, each with a large Plug, or a Rag dipped into some *Balsam*, and thrust in; upon the drawing out of which, there issued forth great Quantity of a dreggy and stinking *Matter*, gathering afresh between the Times of dressing, being thereby shut in. Hist. 57.

After farther Enquiry, I discovered the Spring-Head of all these little Rivulets, arose principally from the glandulous Body in the midst, or under the *Mamilla*, first deeply apostemating and raising small *Abscesses* round about, but still superiour, or lying above the Source of the Mischief, and insufficient for disburdening the same, otherwise than as the *Matter* super-abounded.

Which being the State of the Case, I began her Cure by passing a small but long Piece of *Gentian*, suitably proportion'd, from the most likely Orifice, down into the glandulous Body, throwing out all the other Tents, and dressing only with an external

external Pledget of the common *Digestive*, suffering them to heal or continue open, as the natural Bent of the Humour should dispose, by which, being render'd easy in these Parts, she was better able to endure the Stretch of the Root in one of them.

This Method was continued till I had made way for a Piece of Root near three Inches in Length, and of the Thickness of my little Finger; when having thinned the *Sinus*, I more strictly examined and found, especially towards the Extent, that I must cut more than an Inch thick, with three in Length, before I could come at the Bottom, or lay a good Foundation for healing.

After this, concealing my real Design from the Patient, tho' I had appriz'd some of her Relations, by Appointment I met that worthy Man, my good Friend, Mr. *Blundel*, and after a short Consultation by our selves, he readily agreed to the cutting into the Cavity, and pitch'd upon a Pair of large strong-shank'd *Probe-Scissars* I had provided for the Work; where having an *Apparatus* ready, tho' out of Sight, for the same, we came to the Gentlewoman, and gave her Encouragement for a speedy Cure, by her admitting us to open a small Part of that Hollowness. She having been exceedingly harraiss'd by other Methods, and for so long Time also, was more easily prevail'd on to submit her self; and leaning her Head on the Bosom of one of her Friends, I advanc'd the Button-Shank of the Scissars towards the farthest Part of the said Cavity, and with one Stroke of Gripe laid it open; whereupon a divided Artery spurted out, but which, after permitting to bleed a little while, was quickly restrain'd, by thrusting down a hard Button, dipp'd in the Powder of crude Allum, on the Place whence it sprung; fill-

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ing the rest of the Cavity with dry Dossils, also Bolsters both of Tow and Linnen Cloth dipp'd in *Oxycrate*, and sprinkled over with *Farina Volatil*. on the outside, rolling up much after the manner directed for the fractur'd *Clavicle*, ordering the Nurse to keep her Hand down close upon the Dressings for some Hours, or till they were grown dry.

That Night she was dispos'd for Rest, with a gentle *anodyne* Draught *ex Aq. Papav. ʒj. Sal Nitri ʒj. Syr. de Meconio ʒvj.*

The other Orifices, which were five in number, were dress'd up, as before, with a *Digestive*, not doubting their Healing now the great Fund of Matter was emptied, and the Supply therefrom cut off.

Two days after, in regard to the Flux of Blood deferr'd so long, we met again, and carefully took off the Dressings, intending to leave the Button upon the Artery, if it came not away of itself: But, to our Consternation, together therewith started up an extraneous Body, which, upon enquiry, we found to be a Rag roll'd up Tent-fashion, and, as we could gather, had lain there several Months, grown black and stinking, being by one of her former Operators, doubtless, thrust in, and sinking lower, escap'd after as well remembrance as sight, which sufficiently justify'd our Proceeding, and without which it had been very unlikely, at least for some time, it could have been taken forth.

This discover'd and remov'd, we filled up the Wound with soft Dossils, dipp'd in the warm *Liment* of *Arcaus*, which being digested therewith, and a little *Precipit. Rub.* sprinkled on the *Sloughs*, and strew'd round about to correct the Flesh, was soon after deterged, so that gradually lessening

ing the said Dossils, the Wound was incarn'd, and, by the dry Lint only, cicatriz'd in about five Weeks Time from the laying open the Cavity, the Sores above all healing up quickly after; but an Induration remaining longer, gradually resolv'd under the *Diagalbanum* of *Bates*.

Towards the Close of the Work, and to hasten off the Remains of this Induration, she was purged between whiles with *gr. xij.* of *Calomel.* in a Bolus over Night, with *Cons. Ros.* and the *Decoct. Senæ cum Manna, vel Syr. Ros. Solut.* the next Morning; and being tired out before, by the Continuance of her Pain, a *Hætic Pulse*, with *colliquative Sweats* threatening a *Marasmus*, was order'd also to take Asses-Milk, with the *testaceous Powders*, which recruiting her Flesh, she soon after recover'd, and regain'd her former State of Health.

Of other Disorders befalling Women in Child-bed, or upon their Delivery.

Abcesses
from the
Lochia
suppress'd
in the Time
of Child-
birth.

THE next of the Maladies to be taken notice of, and which we forgot to mention among the Tumours in our first Section, are those arising from a Suppression of the *Lochia*, or natural Purgations, vulgarly by the *Midwives* call'd *Cleansings*, attending Women the first Days after their *Labour*, being truly *excrementitious*, and which ought therefore to be cast forth, lest otherwise retained contrary to Nature's Appointment, contaminating the Mass of Blood, a Fever is raised, and that of the worst kind, by which Life is often endanger'd, unless she steps in between, and congregating as it were the Poison into some particular Part of the Body, throws it *critically* forth in the Form of an *Abcess*.

Whether

Whether or no these Humours, thus flowing from the Womb at such times, have any thing in them of a *venene* or poisonous Nature, may perhaps be questioned by some, tho' seeming more than probable to others: Nor is it any thing absurd to believe, that during the time of their Collection about the *Uterus*, whose Substance is thereby so thicken'd and enlarg'd, as if stuff'd with a *Parenchyma*, being here as it were *stagnis'd*, and out of the Laws of Circulation, growing *putrid*, should put on a *deleterious* Quality, requiring therefore, according to Nature's Appointment, after Delivery, to be spew'd out of the *Glands*, whereby the Womb again subsiding, returns soon after to its pristine Magnitude.

I am the rather inclined to this Belief myself, not so much from the ill Colour and Scent of the said *Lochia*, but the ill Effects from their Suppression, suitable to some of those from other Poisons mix'd with the Juices of the Blood, and impressing the same with the like *gangrenous* Disposition, together with the most formidable Symptoms excited in that subtil *Fluid* of the *Nerves*, disturbing their whole *System*; such as *Rigours*, *Tremours*, *Spasm* or *Subsultus*, *interrupted Respiration*, *undulating*, *intermitting Pulse*, *Coma's*, *cold Sweats*, and *Death*; or, seizing some particular Parts, inducing *Necrosis* thereon, or *Mortification*, after the manner produced by some *epidemical*, *malign Small-Pox*, unless, as above remark'd, *Nature* be strong enough to overcome and vanquish the deadly *Toxic*; or, separating from the rest of the *Mass*, to throw forth the *morbid* Matter, by raising an *Abscess* in some of the Parts; altho' here too, sometimes, we have but a poor Chance for an Escape, the same being too much for the Art of *Surgery*, and situate out of reach, whence an in-

curable *Fistula* arising, the Patient, tho' it may be not so suddenly, yet dies more miserably under a *Marasmus*. A Case or two of which Nature, however seeming desperate, where the Success surmounted my own Expectation, I will here insert, so soon as I have given you the following Instructions.

That however in the *Tumours* or *Abscesses* from *Milk*, where the Fever was of that *Species*, Physicians call *Συρεχὴς*, *feve benigna*, and *symptomatical*, there may be little need of *physical* Administration, especially the Time of *cleansing* being over; yet in all those arising from the *lochia* Suppression, when the same turns presently to a *Σδροχὴ*, *severa maligna*, the *Physician* is timely to be consulted, that by proper Methods they may be again promoted; whilst the *vital* Indication is also provided for, by such *cordial* and *Alexipharmic* Remedies as may subdue the *Malignity*, and fortify the *Spirits*, preserve the *Tone* of the *Blood*, and prevent the *Grumescency* thereof on the one hand, or running out into *Fluxes* on the other, whilst the *Surgeon* uses his utmost Endeavours to stop the Progress of a *Gangrene*, if any such attends; or hastens *Maturation* of the *Tumour* appearing, if it will not admit of *Resolution*, as we have given Directions for the *Pblegmon* terminating in a *Mortification*, or otherwise tending to a *Suppuration*.

HIST. 58.

A middle-aged Woman, of a thin Habit, inclining to a *Hætic*, by too early rising (the Bands of thousands at these times) and getting cold, had her *Lochia* stopt suddenly upon her, by which a *malignant* Fever, with frequent Return of *Rigours*, came on, and after two or three Days she began to complain of great Pain in the Bottom of her Belly towards the Groin, stretching obliquely upwards on the same Side. The fourth Day a Streak of Red appear'd on the Place, which in the

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the Evening settled more downwards, and fixed itself on the *Glandules* of the *Inguen*, rising up as a *malign Bubo*, hard and painful.

When they had tried for a few Days her Midwife's Applications, the *Tumour* still farther encreasing and threatening an *Abscess*, I was admitted to take a view, just as they were about to apply some roasted *Onions*, to which, having examin'd the Part, I readily gave way; but deliver'd my Opinion in very doubtful Terms, in that of a *Prognostic*, viz. That as there now appeared to be an Effort of *Nature* to throw off some Impurities separated from the Blood, and likely to turn to *Matter* by the great Pain attending, it was by all means necessary the same should be invited outwards and discharged; but considering its Rise from the *Child-bed* Purgation stop'd, polluting the Mass with a *malign Ferment*, it was a dangerous Case: And by the great Hardness extending itself high upon the Belly, very likely to penetrate the Cavity thereof, and turn to a *Fistula*, as difficultly, if at all, to be cured.

Coming to her next Day, I found her very restless, melting away in Sweats, with a *low, quick*, and *unequal* Pulse, high Colour in her Face, crying out of great Pain, not only on one Side, but the whole *Region* of the *Womb* or *Bladder*, from which she had discharged a small Quantity of Urine, tho' at several times, which appearing highly inflammatory, I was still fearful those Parts were affected, and that the Original of this threatening Mischief lay on the inside of the *Peritoneum*.

Upon taking off the *Onions*, I thought I felt *Matter* underneath, tho' very deep, and having provided a *Cataplasm ex Rad. Lill. Ficus Ping.* as directed for *Maturation* of the *Phlegmon*, the

same was now laid on, in hopes that in a day or two, at farthest, if we could keep her so long alive, we should find the *Tumour* fit for opening; to hasten which, tho' she had no Stool for three Days past, yet I declin'd giving even a common Clyster at this time, for fear of checking the *Access*, too far advanc'd, and unsafe to be diverted otherways: So that contenting myself with directing an *alexipharmic Bolus*, ex *Pulv. Lap. Contrayer. & Theriac. And.* a *℞i. cum Syr. de Croco q. s.* also a *Pearl Julep* for the Support of her Spirits, I left her for the present; yet late the same Evening was sent for in great haste, her Friends thinking she was dying.

But understanding she had at all times a weak *System* of those Parts, and was subject to *hysterie Symptoms*, I was in hopes this might be no other than a *Paroxysm* of that kind; upon which account I straight directed for her as follows;

First of all, for quickening and promoting an Expansion of her Spirits, or raising her drooping Pulse, as also to secure her from *Convulsions*, a large Vesicatory was laid on betwixt her Shoulders; and to assist *Nature*, in throwing the malign and morbid Matter still farther outward, a *Bolus* and *Julep* as follows;

℞ Rad. Contrayer. ℥ss. Pulv. è Chel. Canc. C. ℞i. Croci Castor. ā gr. v. Conf. Alkerm. q. s. m. f. Bolus sumendus quam primum, & repetendus deinde vix quaque hora, superbibendo Cosbl. quatuor aut quinque Jalap. sequentis, cujus totidem bibat per se in intervallis vel in languoribus.

℞ Aq. Lat. Alex. Ceras. Nigr. ā ℥iij. Theriacal. stillat. ℥ij. Bryon. c. ℥i. Tinct. Croci Aq. Theriac. extr. ℥ss. Conf. Alkerm. s. o. ℞i. Syr. è Cort. Citri ℞i. m.

℞ Spir.

R^x Spir. C. C. per se ℥ss. sumat gut. xx. in quolibet potulento subinde.

R^x Spir. Sal. Armon. cum calce destillat. in phiala orificio amplo sed bene obturato ℥ss. cui, amoto illo, olfaciat, vel naribus admoveatur sub deliquio.

The Cataplas^m lying in good order, was continued 'till next Morning; when, returning early, I found her somewhat relieved of those nervous Symptoms, having much more Warmth, a stronger, yet still a little intermitting Pulse, less Tumour, and Fainting.

Removing the Pultis, I found the Matter so far advanced, that I applied at the same time a large piece of the Lap. Infern. on the rising Part of the Tumour, which was in the Groin, and about Noon return'd, when her Blister was cut; but, in consideration of her fainting under the Smart and Discharge thereof, I defer'd opening 'till towards Evening, when I cut thro' the Eschar, and suffer'd, but without pressing, what would, of a greenish, offensive, or stinking Pus, to run out, which discharged near a Pint in quantity: After which she grew very easy, the Eschar being dressed up with a Pledget of Basilicon, I apply'd all round, at this Dressing, some more of the same Cataplas^m, to soften the Induration of the Muscles, and farther the Suppuration. I have used these Words, what would, to shew that you are not to discharge the whole Quantity at once; for that were, at sometimes, to exhaust your Patient's Strength, and hazard a Deliquium, as well as Suffocation of the native Heat of these Parts: For, as Hippocrates well observes, Multum, & de repente evacuare, aut replere, aut calefacere, aut frigesfacere, vel aliter quocunque modo Corpus movere, periculosum; nam enim omne multum, i. e. nimium, Naturæ est inimicum,

inimicum, quod vero paulatim fit tuto est, tum alias, tum si quis ex altero ad alterum transeat.

The Day following, the *Tumour* was quite sunk by the vast Discharge, the Nurse acquainting me she had been forc'd to shift the Clouts that were put to her under the Napkin, pin'd lightly round for the Support of the Dressings as well as them, several times in the Night, being foul or wet with the *Matter*; and that which I now order'd her to take away (which had not lain on above two Hours) I perceived in like Condition, sending forth so strong a Stench as made the Room offensive to come into.

Thinking it needless to make any Probation at this time, of which she was exceeding fearful, I contented myself with dressing up the *Eschar* as before, adding only a little *Spir. Tereb.* to the hot *Basilicon*, in which the Pledget was dipp'd, for correcting in some measure the Putrifaction, and leaving off the *Pultis*, I had order'd an *elixiriate Fotus* of the *discutient Plants*, such as the *Summit Centaur. Hyper. Flor. Chamomel. Melilot. Sambuc. Fol. Laur. Bac. Juniper.* these being boiled with a handful of Wood-Ashes in Spring-Water, were after strein'd; to a Quart of which boiling hot, adding, as customarily, three or four Spoonfuls of *camphorated Spirit*, and applying it with hot Flannels strongly express'd, all over the Belly: The *Tumour*, as I observ'd, being now sunk about the *Eschar*, and the *Abdominal Muscles*, which two or three Days before felt thick and hard, appearing again lank and flaccid as the Groin itself, though as yet too painful to bear either *Compression*, or any sort of *Bandage*.

For alleviating this Tendernefs of the *Abdomen*, I prescribed the following *Liniment*:

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℞ *Ol. Lumbric. & Ung. Dialth. ā ʒi. Sperm. Ceti ʒi ss. Ol. Anis. Cbym. ʒi. m. f. a. & f. Litus: quocum (coram igne liquefacta) manu calida fo-weatur Regio Abdominis, precipue ejus pars sinistra, post usum fatus pannum laneum, eodem im-butum, superponendo.*

I farther ordered a *Chyster* at this time, by rea-son of her not having had a Stool for several Days past.

℞ *Decoct. Com. pro Chyst. ʒxij. Mel. Mercurial. Syr. Viol. ā ʒi. Sal. Gem. ʒi. m. f. Enema injicien-dum quamprimum parari potest.*

I was at this time again press'd by her Friends, to deliver my Judgment of her Case, which I told them was still very doubtful; for although I had not examined the *Sinus*, yet by the Discharge which continued in large quantity, it was plain the same ran very deep among the Muscles of the lower Belly, if not into its Cavity, of which I intended as well to satisfy myself as them, in a Day or two more, being willing to give her re-spite from any farther Disturbance, either of Mind or Body, 'till the *Eschar* was entirely separated, and her Strength a little better recruited; for which end she continued her *cordial Bolus* Night and Morning, with the *Julep* as before: Her Diet was *Chicken - Broth*, *Barley* and *Water-Gruels*, with a little *Wine*; likewise a thin *Jelly* of *Hartshorn-Shavings*: also another *Julep* loaded with the *testaceous* or *absorbent* Powders, *ex Mar-gar. Coral. Rub. Chel. Canc. simpl.* in order to streng-then the enfeebled Tone of her Blood, which was still prone to run out into Sweats: *Almond Milks* and *Emulsions* to contemperate the Heat, and pre-vent the *Hætic* she seem'd to be threaten'd with-al.

In two or three Days more, the *Eschar* throwing off, I earnestly press'd them for a *Consultation*, but her Midwife having been very lavish in setting forth my Abilities, and giving some Instances of my Success, in Cases of the like kind; at least so represented by her, although wide in fact, particularly a very remarkable one upon herself, which shall be recited presently, they would hear of no other Assistance, more especially the Malady being so situate as it was. Wherefore, having only prevailed for the introducing of my *Probe*, I found a very easy Admittance, which was presently buried in its whole length, running obliquely from the *Inguen* towards the *Os Ileon*, under the oblique and *transverse Muscles* of the *Abdomen*, by which I found one part of my *Prognostic* likely to be verify'd, and, drawing out the Instrument, I enter'd a *searching Candle* of greater length, to find the Extent of the *Sinuosity*, which was little more than what I had before reach'd. I then attempted, by bearing downwards, to find, as I withdrew the *Candle*, but could not discover, a Penetration into the *Pelvis*, or through the Coats of the *Peritonæum*.

Having thus satisfy'd my Enquiry, I dress'd up the *Ulcer* with a large Dossil strung, of suitable Proportion to the Cavity first arm'd with *Linim. Arcaei*, in the Place of *Basilicon*, now left off upon the Fall of the *Eschar*; and dipping it in a Panniken of the same melted down with about a sixth Part of *Tind. Myrrh. & Aloes*, in order to correct the putrid Condition thereof; strewing the bottom, for the same end, with the *Præcip. Rub.* the Midwife in the mean time, who was always by at the time of Dressing, applying the hot *Stuphs*.

At a Weeks end from the Separation thereof, the Discharge lessen'd; and the Patient seem'd

to grow stronger, the *Ulcer* in the Groin filling up
 with *Flesh*, the *Tenderness* of the *Abdominal Mus-*
cles wearing off; so that I now endeavoured, by
 gentle *Compression* and straighter *Bandage*, as the
 Part would admit, to agglutinate the Cavity: But
 finding my Intention that way fruitless, when I
 had brought the external *Ulcer* into a narrower
 Compass, I seriously proposed to her, finding her
 so exceedingly averse to the *dilating*, or laying it
 open, Whether she thought preferable, a *Fistula*
 without cutting, with its Consequences at length,
 a gradual Wasting of her Strength by the Dis-
 charge thereof, or, in plain Terms, a *Consump-*
tion? Or, a reasonable Prospect of her Cure by
 the said *Dilatation*? making as light as I could
 of this latter, for her greater Encouragement;
 when, dressing up again for the present, I left
 her to consider of it 'till next Day; by which
 time I found the Midwife's *Rhetorick* had pre-
 vail'd; and, with greater Resolution than I ex-
 pected, she told me she would submit herself to
 my Disposol, who having provided all things rea-
 dy, in a Dish by the Bed-side, (however out of
 her sight) in order to the Work, viz. *Large*
Dossils of Lint roll'd hard up, of several Sizes, others
of Tow, with Compresses of the same, a Plate with
Farina Tritici, a Bason of Oxycrate cum Alb. Ov.
restringent Powders, ex Pulv. Gal. Bolo Vero, Chalc-
ant, &c. in distinct Papers, as I should find occa-
sion, with a Roller of suitable length: I took off
 the Dressings, again entering the *Probe*, and far-
 ther satisfying myself in the Course of the *Sinus*,
 having, as I observ'd before, a thin Subject to
 deal with, trusting to my *Scissars*, I enter'd the
 Shank of the Button-end, and, instantly cutting
 through, passed the same still higher up, my Pa-
 tient knowing not my farther Design, when re-
 doubling

doubling the Stroke, I laid open the whole Cavity, finding no other than a *venal Hemorrhage*, I clap'd down my Dossils with what dispatch I could, dip'd first in the *Bole* singly, with which having cover'd the bottom of the Incision, I laid down others of Tow, 'till the whole was filled up close; then laying on the Bolsters of the same, wrung out of *Oxycrate*, and sprinkled thick with the *Farina*, I brought over the Ends of a double-headed Roller alternately, as well up the Twist as round the Trunk of the Body, 'till I had made all secure; the Patient, though making a great Noise, yet not fainting all the time, but before Night she grew feverish again and restless; tho' we had provided for her a gentle *anodyne* Draught, she had slept but little, complaining of great Pain in her Belly, which, when she happen'd to cough, from the Shock of the *Diaphragm*, together with that of the *Peritoneum*, forced her upon crying out.

On removal of our Dressings the next Day, I perceiv'd an *Inflammation* all round the Wound, the Edges or Lips thereof lying high and turgid, from their Contusion by the Scissars, and *Indigestion* thereof. The lowermost Dossils still adhering to the *Peritoneum*, I forbore using any Force to extract them, chusing rather to let them digest off themselves; which I now endeavoured to promote, by laying softer Dossils of Lint dipped in a warm Mixture of *Liniment. Arcai*, with about a fourth part of the *Bals. Tereb.* having, whilst it was provided, laid on a warm *Stupb* expressed out of hot Wine ready at hand, 'till the former *Fomentation* was provided; then covering the outside of the Wound with a large Pledget of Tow, fac'd with the *Liniment* aforesaid, first embrocating the whole Belly with the Mixture *ex Ol. Amygd.*
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Sect. X. Of Tumours in Child-bed Women. 379

Sperm. Ceti, &c. covering the Parts with a soft Flannel, and instead of the Roller, which their Soreness would not bear for the present, a large Napkin folded in two, being placed in the middle under her Hips, with the ends brought over, and fasten'd on the upper part, towards the sound Side, for keeping on the Applications only.

By reason of her Cough, which seemed now more than ever to give disturbance, I directed the following *Linctus* and *Apossem*, with a *Pearl-Julep* to refresh her under *Languor* of Spirits.

℞ *Ol. Amygd. d.* ℥i℥. *Sperm. Ceti cum eodem optime incorporat.* ℥i. *Syr. de Meconio* ℥i. *Syr. Bals. Tolut.* ℥℥ *Sacchar. Cand. alb. pulv. parum m. exactissime pro Linctu, cujus capiat Cochlear. urgente Tussi, & superbibat Haustulum tepesfactum Apof. sequentis.*

℞ *Decoct. Pectoral. depurat* ℥i℥. *Tinct. Croci Aq. Theriac. Extr.* ℥℥. *Syr. Capil. Ven.* ℥i. m.

℞ *Aq. Laet. Alex. Ceras. nigr. a* ℥iij. *Cinnam. Hord. Pæon. C. a* ℥i℥. *Margarit. pp.* ℥i. *Sacchar. q. s. m. f. Julapium, cujus (phiala prius agitata) capiat Cochlear. tria vel quatuor in Languoribus.*

Continuing costive, I thought it now absolutely necessary to empty her Bowels, by throwing up the Clyster formerly prescrib'd, which answering the Intention, she grew much easier, in the Evening slept tolerably, and seem'd therewith refresh'd the next Morning; when, coming to lift out the *Dossils* with my *Forceps*, I found the Lips of the Wound digesting, less tumefy'd, the Belly also much less inflamed, the lowermost *Dossil* now rising with the rest, appearing also with Corruption; which being removed, I could plainly discover

cover the outward Membrane of the *Peritoneum* lying bare, between four or five Inches in length, and about one in breadth: After which, laying down gently a soft one dipped in the warm *Balsam*, I lightly filled up the Cavity of the Wound with more, and a Pledget on the surface as before, arm'd with the *Liniment*, dressing up again, my Assistant the Midwife always taking care to apply the Flannels wrung out of the *Fomentation*.

And thus we continued daily, 'till the *Membrane* incarnating, and the *symptomatic* Fever with Pain and *Inflammation* being dispersed and gone off, she was capable of bearing a gentle *Compression* and *Deligation*: Matters appearing in great Forwardness for a speedy Cure; 'till, by an Error committed in drinking a Draught of small Beer, she fell into a *Diarrhœa* with *Cholic* in her Bowels, much hindering the Advance thereof; the Flesh now sinking, and as it were melting away, cold Sweats and *Deliquium* frequently, as at first, returning; for which I made the Provision following:

℞ Conf. Fracast. s. m. ℥j. Coral. Rub. Spec. de Hyacinth. ā ℥ss Rbad. Rhei. parumpier tost. gr. vj. Ol. Cinnamon. Chym. Veri gut. j. Extr. Thebaic. gr. j. Syr. de Mentba q. s. ut f. Bolus. Sumendus statim, & repetendus quinta quaque hora (*Extracto tamen omisso*) & superbibat Haustulum calidum Apof. sequentis, cujus bibat loco alterius potulenti, dum sit proclivis ad Fluxum Alvi.

℞ C. C. C. ℥ij. Nuc. Mosc. contus. ℥j. coquantur cum Crusta Panis albi in Aq. Font. q. s. pro. Collatura ℥jss. sub finem addendo Coccinil. contus. ℥j. Liquori per Setaceum trajecto adde Aq. Cinnamon. Hord. ℥ij. Mirabil. ℥j. Sacchar. alb. chrystal. q. s. m. f. Apofema.

℞ Aq.

R^x *Aq. Lact. Alex. Cinnam. Hord. a ʒiij. Conf. Fracast. f. m. ʒij. f. Mixtura in promptu, de qua propinentur Coch. duo post singulas sedes, Vitrum concutiendo tempore usus.*

R^x *Apos. superscript. Vini Canariens. a ʒij. Theriac. Andr. ʒss. Solv. cum Vitello Ovi & f. Enema, injiciendum post Bolum secundum, hora una vel altera tamen præterita fluxu adhuc persistenti.*

By these means, continued for two Days, or thereabouts, the Looseness was checked, and her Pains wore off; when, to regain the lost Flesh, I sprinkled upon the *Ulcer* a fine Powder of *Myrrh*, *Aloes* and *Sarcocolla*, as I had before done the *Precipitate* to mundify; laying over still, as a *Digestive*, the *Liniment. Arcei*, by which Method we got daily ground, without farther Relapse, and being fit for the same, it was cicatrized with my *Cerate*.

After this so remarkable Escape, I advised her to the *Asses-Milk*, and the *Milk-Diet*, by which her Cough and hectical Disorder wore off, and was entirely vanquish'd: She recovering a good State, and has since borne two Children, without suffering any unusual Disorder thereby.

A Woman also middle-aged, but of strong Habit, and sanguine, the same Person taken notice of in our last as practising *Midwifery*, after her own Labour, depending very much on her Constitution, rising too soon, the *Lochia*, stopping, was seized with *Shivering*, and being got to bed, soon after great Heat and Thirst, Oppression on the *Pæcordia*, with a quick and labouring Pulse. HIST. 59.

The next Day she complained of great Pain in her Belly, which being taken for *After-Pains*, or a cholical Disturbance, she took of her own Advice, some *Sperma Ceti* mixed with *Myrrh*, also a Clyster

Clyster of a Decoction of *Chamomile Flowers* and *Oil of Anniseeds*: But finding it a Case out of her own reach, and no Relief from these or other Remedies she had taken, her Fever and Pain increasing, the third Day she begged my Assistance.

Examining the Part, I perceived from the Navel downwards towards the *Pubes*, great Induration through the Muscles, the same being so tender that she could bear no handling without great Complaint, but as yet there was no *Inflammation*; wherefore I directed only for the present, the following *Liniment*, and an *Embrocation*, with an *alexipharmic Bolus* and *Julep*, to promote a gentle Perspiration, subdue the *Malignity*, and excite the *Uterine Discharge* or *Cleansings* now suppressed, giving rise to this Disturbance.

R̄ Pulv. Lapidis Contray. ℥j. Troch. de Myrrh. ꝑp.
 ℥ss Croci Castor. a gr. v. Conf. Alker. s. o. q. s. m. f.
Bolus quinta quaque hora repetendus.

R̄ Aq. Latr. Alex. Pulegij ā ℥iv. Bryon. C. ℥ij.
 Sacchar. alb. q. s. m. f. Julep.

R̄ Ol. Lumbric Amygd. d. ā ℥j. Sperm. Ceti ℥j. m.
 f. instar Linimenti ad usum externum panno wol-
 lico tepefacto superposito.

But the Hardness still rather increasing, and she fancying she got Cold in the time of anointing, I order'd a Plaister to be laid on, of two Parts the *Diagalb. Batei*, and one of the *Mucilages*, to be continued for some Days, with Advice to have her *Boles* repeated, as before directed.

The second Day after, she sent to me again, and, coming to see her, I understood her Complaints were increased, her Fever high, with her Spirits much exhausted for want of Rest: She now told me her Pain was attended with great
 Throbbing

Throbbing upon the *Region* of her *Womb*; taking off the Plaister, I felt the *Induration* rather increased, but, lying very deep, and inferring, by her Pain, there was danger of an *Abscess*, I threw aside the Plaister for an *anodyne Cataplasma*, ex decocto *Flor. Chamemel. Melilot. Sambuc. in Lacte, Mica Panis in consistentiam redact.* & *vitellis duorum Ovor. cum tantillo Croci additis*, the Belly being embrocated with the *Liniment* before ordered, and the Application secured by a fine Towel reaching round her, and pinned easily on one side,

In the Evening, or about Midnight, she grew *delirious*, and the next Morning, visiting her, I found her in great *Agonies* thro' Excess of Pain, attended with *Rigours* so strong as made the Bed to shake under her, with sick and fainting Fits, likewise Suppression of *Urine*; for which, and to sooth the Parts of the lower Belly, much constipated through the great *Tension*, I instantly directed ℥x. of the *Decoct. Com.* ℥ss. of *Terebinth. Ven.* ℥ij. of *Ol. Lini. Rec.* with the Yolk of an Egg, to be thrown up Clyster-wise; on account also of a *flatulent* or *spasmodic* Twitch upon the Membrane of the *Pleura*, frequently recurring and shifting from one side to the other, with a Cough rendering the same almost insupportable, the following *Linctus* and *Apossem.*

℞ *Ol. Amygd. d.* ℥jss. *Syr. Papav. Rhead.* ℥j. *Sperm. Ceti* ℥j. *Sacch. Cand. Pulv. q. s. ut. f. Linctus.*
De quo (*pbiala conquassata*) capiat *Cochlear. largum*
Bolorum intervallis, superbib. Apof. sequentis
califaceti.

℞ *Decoct. Pect. depurat.* ℥jss. *Aq. Pulegij* ℥iv. *Fi-mi Equin. petia ligat.* ℥iij.

Stent. infusione calida per boram, bis terve vas. agitando dein per subsidentiam depuretur; colaturæ admodum

modum hoc modo clarificata adde A. Theriacal. ℥ij. Syr. Papav. errat. ℥j. Ol. Car. gut. iv. m. f. Apofema.

Upon taking off the *Pultis*, an *Inflammation* now appeared, with the *Tumour* much increased, *Matter* also, as I apprehended, though exceeding deep, seemed to fluctuate about that Region, laying down the same *Pultis*, I directed this which follows to be got ready against the Afternoon :

R. Rad. Alib. Lil. alb. ā ℥ij. Fol. Malvæ, Mercurialis, Parietar. Verbasc. ā mj. Flor. Chamomel. Melilot. ā mss. Ficum ping. No xx. Sem. Lini ac Fenugr. ā ℥j. incisa ac contusa, coquantur sufficientur ut per cribrum usui isto adaptat. trajiciantur, vel alioquin in mortario ad Pulpam cum pistillo redactis, adde pinguedinis anseris, vel illius defectu, Butiri insulsi ℥ij. & f. instar. pultis, cujus pars proportionata (media fortassis) cum quarta Theriac. Lond. admixta supra linteum duplicat. crassiuscule extensa, apponetur prius tepesacta parti abdominis tumefacto.

Directing her *Boles* to be still continued, only leaving out the *Troch. de Myrr.* whose Taste she could no longer dispense with, and adding the same Quantity of the *Spec. Diamb. f. o.* I took my Leave of her for that time; and indeed, by her present Aspect, with the cold Sweats on her Forehead, and weak fluttering Pulse, was doubtful whether I might find her alive next Day; but by the Strength of her Constitution, she had struggled through another Night, in Extremity of Pain, and restless, as were several of the foregoing.

I found

I found the *Tumour* now high and prominent, and Matter also more palpable to my Fingers; so that laying on the Remainder of the *Pultis*, I promised to return in the Evening, and give vent to the same. She had only one Stool from her Clyster, but made not a Drop of Water, which I imputed to the *Inflammation* of the *Bladder*, suffering by Consent as it were, so near at hand with the *Uterus*, which was not likely to come to rights, till the *Aposteme* was discharged.

In the Evening I laid a *Caustic* of the Compass of a Shilling, being in great Concern for the poor Creature 'till next Day; when I visited her early, found her wonderfully over-joyed, and in great Ease, the Swelling she told me was broke; and a vast Quantity of horrible stinking Matter, which I perceived so soon as ever I entered the Chamber, had run down her Belly, gushing between her Thighs, several Clouts and Napkins wet therewith, lying in the Corner of the Room for my Inspection.

But coming to unpin the Napkin and remove the *Pultis*, I found the *Tumour* indeed subsided, and as it were vanished; but, to my great Surprise, the *Eschar* fast and dry, not one Drop of Matter issuing thence: Wherefore examining more narrowly, and taking away the Cloth thrust up to the *Pudenda*, I called for a Candle, perceived more of this stinking *Pus* drained off, and as I laid my Hand, and pressed lightly on the Top where the *Eschar* was, it ran forth the *Vagina* as it were in a Stream, a plain Indication that the Seat of the *Abscess* was in the *Uterus*, at least betwixt the Coats thereof, which having not only the *Peritonæum*, but the *Abdominal Muscles*, that is, their *Aponeuroses* towards the *Linea Alba*, and common outward *Teguments* to pervade, or make its way, being just arrived at the same, burst thro'

the inner *Tunic*, and emptied itself by the *Cervix* into the *Vagina* aforeſaid; affording certainly, however eaſy at preſent, a very doubtful Event, where ſo many *membranous* and *nervous* Parts were corrupted, and threatened by the Putrifaction. Yet, that I might not diſpirit the poor Woman, I concealed all Apprehenſions of Danger, and encouraged her now to hope for her Recovery, aſſuring her of my utmoſt Help; and indeed, tho' I expected nothing for my Pains, I did whatever was in my Power in order to the ſame.

The *Eſchar*, which I had no occaſion to perforate, was dreſſed up with the common *Digeſtive* of *Baſilicon*, with a large Plaſter of *Diagalbanum*; over this a broad Swathe, or Belly-Band, pinn'd ſlack by reaſon of the Tenderneſs yet a while of the Parts; whiſt I directed the *Fomentation* and *Injection* as follows, to be provided againſt next Day, together with a *Womb-Syringe*:

℞ *Summit. Centaur. Hyperic. ā mij. Abſinth. Rom. Fol. Laur. Flor. Chamomel. Melilot. ā mj. coquantur in Elixivij tenuis, q. ſ. ad Colaturæ ℥ij. cuius ſingulis addentur tempore uſus Spir. Vin. campb. ℥ij. Et utatur pro ſotu, pannis laneis in eodem ſerveſaſto intinſtis Et fortiter expreſſis Regioni Uteri applicatis.*

℞ *Summit Hyperic. Centaur. ā mj. Hord. Gallic. ℥i. coquantur in Aq. F. q. ſ. pro ℥ij. Colaturæ, cui adde Me Roſar. ℥ij. Et ſ. Mixtura, Metrencbita ſeu Syringæ auxilio tepide in Uterum frequentur in die injicienda.*

Leaving theſe Directions, I came again the next Day, and cauſed the Belly to be fomented (taking off the Plaſter) with *Stuphs* expreſſed hot and drawn out of the *Decoction*, renewing them for about half an Hour, as they grew cold; then dreſſing up the *Eſchar* with the warm *Baſilicon*, as before, and laying on the Plaſter, after which

with

with the *Syringe*, I threw up some of the Injection warmed, by the *Pudenda*, giving Instructions to the Nurse how it should be done in my Absence: And thus we continued dressing some few Days, till the *Ulcer* being better digested, and the Discharge much decreased, I changed the *Injection* for the following, more *deterfve*, or, as the *Surgeons* call it, *mundificative*, or cleansing.

R̄ Summit. Centaur. Min. Artemis. ā mj. Rad. Aristoloch. rot. ℥ ss. Gent. ℥ij. coquantur in Aq. Hord. q. s. ad ℥ij. addendo Colaturæ Mel Ros. ℥ij. Tinct. Myrrh & Aloes, Vino albo extr. ℥ ss. m. pro Injectione priori modo utenda.

I might have told you, that from the Time of the *Abscess* bursting, the Symptoms of *Fever*, *Pain*, and *Inquietude* went off, she also render'd her *Urine* well, as before her Illness, and we daily got ground notwithstanding the dangerous Situation of the *Ulcer* we had to deal with, the Discharge not only lessening, as we have already observed, but the *Putrifaction* being corrected, the *Matter*-appearing now laudable, and no way offensive.

She seem'd indeed in great Danger of falling into a *Hectic*; but by ordering a *Milk-Diet*, *Barley-Water* and *Milk*, *Balsamic Electuaries*, with *traumatic* or *vulnerary Decoctions*, as I shall insert them presently, the same was happily prevented.

The *Eschar*, by reason the *Matter* was fled from it, and pass'd off another way, was the longer before it digested off, which being separated, the *Belly* lank, and the *Muscles* flaccid, for my Satisfaction, I pass'd a *Wax-Candle* of sufficient Length, by the *Vagina* into the *Uterus*, and thence up to the outward *Ulcer* on the *Abdomen*, but the same bending in its Passage, I was disappointed; I then tried a *Catheter* in the stead of a *Probe*, but found it insufficient, not being long enough

to answer my Ends. The next Day, I brought a stronger Candle, and bending it upwards into a Form as I thought best suiting my Enquiry, I introduced it as before, without the expected Success; yet, tho' I could never pass so high as the Ulcer in the *Abdomen*, at about two Inches beneath, I plainly felt the Extremity thereof under the common Coverings, which induced me to think, that the *Matter* thus suddenly breaking inwardly, and venting it self by the *Pudendum*, had either not entirely rotted the *Aponeuroses* of the Muscles above, or made way by some oblique Passage I could not discover now, by reason of the *Coincidence* thereof, after its sudden sinking away.

Be this as it will, it was very apparent the Body of the *Womb* must have suffered great *Solution* and *Ulceration*: For the farther healing whereof, and consolidating the Breach above, having corrected the Flesh here, by sprinkling the *Præcipit. Rub.* and now dressing with *Linim. Arcei* in place of the *Basilic.* I continued my *detersive Injection*, 'till the Discharge still lessening, and the *Matter* of good Colour, without ill Scent, and of as good Consistence, I substituted the following;

R. Herb. Agrimon. Plantag. Sanicul. Equiset. à mj. Rad. Symphiti ℥i. coquantur in Aq. Fabr. q. s. ad tñss. Sub finem addendo Vini rub. ℥iv. Colaturæ adde Mel Rosar. ℥ij. & f. Injēctio Uterina, ut prius injicienda.

At the same time I dip'd an arm'd Probe in a Mixture of *Mel Ros. cum tantillo Tinē. Myrrh.* with which I dab'd the outward Ulcer upon the Fall of the *Eschar*, that it might diffuse it self downwards through the membranous Parts, if finding Passage towards the Ulcer in the *Uterus*, with good Compress all round, and circular Bandage, as the Sense of the same would admit, endeavouring

deavouring their *Agglutination*, which was very remarkably, in a short Time also, accomplish'd, and the *Ulcer*, as well outwardly as inwardly, heal'd up; the former giving us little more Disturbance than if the said *Eschar* had been made on any other Part unconcern'd with the *Abscess*, altho' the first Days there was certainly a near Communication.

If it be here enquired, Why I us'd no *Injection* from the outward *Ulcer* into the Cavity underneath, as well as by the *Vagina* to the *Uterus*? I answer, That the *Abscess* breaking thus before I was aware, or could have Opportunity of cutting through, had render'd, as was manifest, the Communication less pervious to the same, by that time the *Eschar* was cast off: Besides, had the Intercourse been more demonstrable, I should object, first of all, my Fears, that if it could not have found its Passage, as did the Matter, by the outward *Privy*, it might have hinder'd, rather than promoted, *Consolidation* of the Parts, by increasing the *Sinuosity*, or, falling into the *Pelvis*, laid Foundation for some after Disturbance, to which it was not so liable in passing up to the *Uterus*, whence its Return back was more facile and commodious: Besides, as the outward *Ulcer*, or the Parts immediately underneath, had now no Marks of Putrifaction, but returned in few Days to their former sound Condition, lying soft and easy, without *Tention*, *Inflammation*, and but little Hardness; the gentle Warmth of a *spirituous Fomentation* round about, with the *Liniment*, *Tincture*, and *Mel* (the *Slough* being cast off, and the *Ulcer* mundify'd,) were all, which were required or sound wanting.

The *balsamic Electuary* and *vulnerary Decoction* I kept her to, for the greatest Part of the Time af-

Of Tumours in Child-bed Women. Sect. X,

ter the breaking of the *Apostem*, and which I dare say, afforded great Assistance in expediting her Cure, were these :

℞ *Conf. Ros. rub.* ℥i℥. *Bals. Lucatel.* ℥℥. *Pulo, Oliban.* ℥i℥. *Bals. Peru* ℥j. *Syr. de Sympbito* q. s. m. f. *Elect.*

De quo capiat ad magnitud. n. m. mane ac vesperi, superbibendo ℥iv. *Apos. infra scripti, cujus eandem quant. bibat per se quarta pom.*

℞ *Rad. de Sympbito* ℥i. *Fol. Capil. Vén. Tussilag. Hyperic. Alchimil.* ā mi. *Plantag. Pentapbil,* a m℥.

Coquantur in Aq. F. ℥vi. ad medias sub finem addendo Vini alb. ℥℥. & Colaturæ claræ per subsidentiam Syr. Bals. Tolut. ℥i. singulis ejusdem libris.

HIST. 60.

A Butcher's Wife, by the Bars without Bishopsgate, of a full and strong Habit, after a hard Labour and undue *Cleanings*, fell into a putrid Fever, intermitting with irregular *Exacerbations* and *Remissions*; soon after which, from a *Traslation* of the morbid Matter settled thereon, she began to make complaint of Pain at the Bottom of her Belly, as I remember, on the left Side thereof, where she quickly perceived a Hardness gradually increasing, insomuch that she was hindered from going about, or standing upright, and indeed at length from sitting in her Chair, being wholly confined thereby to her Bed.

After several Weeks she consulted me, who found her, through the great Inquietude and Fatigue of Pain, reduced of a sudden, from a full and bulky, to the Condition of a *hectical*, emaciated, or *consumptive* Person, with a violent Cough attended with extravagant or profuse Sweats: T

mo

moderate which, and temper her Blood, I pre-
scrib'd a *pe&toral Lin&tus*, ex *Ol. Amygd. d. rec.*
Sperm. Ceti ac Syr. Dialtb. likewise an *Apos&m*, ex
deco&to Pe&t. cum *Syr. Bals. Tolut.* for her Heat and
Sweats, as also the Trouble she had in rendering
her Urine, an *Emulsion*, ex *Sem. fr. Papav. alb.*
Amygd. dul. deco&t. in *Aq. Hord. cum Gum. Arabic.*
solut.

To the *Tumour*, which lay deep under the
Muscles, stretching from the Groin upwards, but
without any appearance of coming to *Suppuration*,
a *dis&cutient Fomentation*, with some *Emollients* ad-
ded thereunto, such as a *Deco&tion ex Sumit. Cen-*
taur. Hyperic. Flor. Chamomeli, Sambuci, Fol. Mal-
va, Verbasci, parietar. in Milk, with soft Flannels
wrung out of the same; after which a *Gummy*
Plaster was laid on.

But these making no Impression, the *Tumour*
continuing at a stand, and her Strength daily de-
caying, through her want of Rest, she sent for
Dr. B——l, who gave her several *antifebril* and
antispasmodic Medicines, for the *Convulsions*, as she
call'd them, in her Bowels, not much regarding
the *Induration*: And being tir'd with his Course,
she call'd in Sir D——d H——n, who return'd
her to her *Oil* and *Sperm. Ceti*, with a gentle *ano-*
dine Draught Night and Morning, ex *Ol. Amygd.*
& *Syr. de Meconio* à ʒ ʒ. with the foregoing also
a *Pultis* of a *Deco&tion* of some of the like Plants,
thicken'd with Crumbs of white Bread; telling
her, (in the usual Phrase of some, who render
themselves difficult to come at, or rise rather by
Management than Merit) that had he been call'd
sooner, he could have cured her; but it was now
too late, the Case being so far gone: Which im-
plies, I think, somewhat like, if not the very
same, that those who had been first consulted,

and who had some Pretensions to a better Knowledge in *Surgery*, though not to the Practice of *Deliveries*, than himself, had not acted as they ought.

Thus leaving her with this melancholy *Prognostic* they contented themselves several Days, or, I think I may say, Weeks after, with their own and other good Women's Experiments, so great an Oracle having given up her Case, 'till the Swelling farther advancing, she was persuaded to send to me again, and request my Help.

I found her still weaker than when I left her last, with great *Oppression*, quick and low *Pulse*, flushing in the Cheeks between *robiles*, drowned as it were in *Sweats*, her *Cough* still continuing, and the *Facies Hippocratica* now apparent.

The *Tumour* was indeed risen higher, but without *Inflammation* or *Fluctuation* underneath, tho' more reason than ever to believe, if she held out, it would terminate that way: Wherefore I advised them, to lay an *emollient* and *maturative Cataplasm*, leaving out the *Discutients*, and adding the *Rad. Lill. cum Ficub. ping.*

I persuaded her also, as the last Recourse, to drink the *Asses-Milk*, with a *Morsel* of the *absorbent Elect. ex Conf. Rosar. Spec. Diatragac. Margarit. Coral. Rub. cum Syr. Dialth.* and the following Mixture for her *Cough*, also a *Julep* when faint with *Sweats*.

Rx Aq. Cinnamom. Hord. ℥ii. Syr. Bals. Tolut. de Meconio ā ℥i. f. Mixture cujus capiat Cochlear. prelargum aliquo tempore tussi magis infestante.

Rx Aq. Lact. Alex. Seras. nigr. ā ℥iv. Cinnamom. Hord. Paon. C. ā ℥i ℥s. Cretæ Albæ purif. Margarit.

rit. pp. Coral. Rub. pp. a 3 ſs. Sacchar. alb. cryſtal. parum m. f. Fulapium de quo (vitrum agitando) capiat Coctlear. tria vel quatuor in languoribus, & ſudoribus obrutus.

Thus viſiting once in two or three Days, 'till at length the Part began to inflame, the *Induration* ſoftening, and *Matter* fluctuating underneath, I met her *Surgeon*, and adviſed a *Caustic* to be laid on the riſing Part.

The Day following we came again, when thruſting his Lancet into the *Eſchar*, there diſcharg'd a Pint-Baſon full of a ſtinking, greeniſh *Pus*; after which ſhe grew eaſy, and her Sleep, where-to ſhe had been long a Stranger, returned naturally.

The *Eſchar* was dreſſed up with the common *Digeſtive*, a *Pledget* thick ſpread with *Baſilicon*, and dip'd in a melted Mixture of *Liniment. cum tantillo Ol. Tereb.* a *Fomentation* being alſo provided to comfort the Parts of the lower Belly, promote the *Digeſtion* of the *Ulcer*, and diſſipate the *Indurations*.

After three or four Days, according to the Appointment, we met again, and examining farther into the Condition thereof, found a manifeſt Penetration through the *Peritoneum*, into the *Pelvis*, whence the Matter iſſued out, tho' not ſo ſtrong ſcented as at firſt, yet in large Quantity, threatening a *Fiſtula*.

The *Caustic* had deſignedly been laid on pretty large, or about the compaſs of a Shilling, and conſequently the *Ulcer* left behind ſtill larger, in which the *Fleſh* lay round about all putrid, and, on preſſing of the ſame, a ſtrong *Flatus* would iſſue forth in Bubbles, making a loud Noiſe.

The

The *Eſchar* being ſeparated, the ſame was ſtrewed thick with the *Præcipit. Rub.* and a ſoft Doſſil, tied with Thread for its Extraction, being firſt dipped in melted *Liniment*, a little *Balf. Tereb.* and the *Tincture* of *Myrrh*, was laid down cloſe to the bottom, leaving however ſufficient room for the Matter to empty itſelf between the Times of Dressings; after which others, 'till the whole Cavity was filled up; and, laſtly, a large Pledget of Tow, armed with *Liniment* by itſelf, for the outſide; laying *Compreſſes* as well of Plaister as Cloth, where we ſuſpected the Matter moſt likely to lodge or to be detained within, to preſs it forth, and diſpoſe the Parts for *Agglutination*, by the help of *Bandage*, as well up the Twiſt as round the Trunk of the Body.

Thus did the *Surgeon* continue Dressing, 'till the *Ulcer* was well *deterged*, and a ſound Fleſh began to appear, during which time ſhe kept to her *Aſſe-Milk*, and daily recruited in her Fleſh, her Appetite returning: When after ſome Weeks the Diſcharge leſſening, and gradually dreining away, the Cavity filled up, and, with the common *Epu-lotics*, was at length firmly *cicatrix'd*: Since which time ſhe is again grown ſtrong and luſty.

Theſe three Caſes I have inſerted, as very remarkable for the Recovery of each, under the moſt threatenng Circumſtances, whiſt many others, I have attended at theſe times, have died miſerably; the *Tumours* either never coming to *Suppuration*, but tending to *Gangrene* and *Mortification*, making hereby a more quick Diſpatch; or turning to *Matter* out of reach of coming to, at leaſt ſo as to cleanſe the bottom, and lay a Foundation for healing, incurable *Fiſtula's* have ariſen, and the Patients, after much Pain and Penance,

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Penance, as well *physical* as *chirurgical*, have obtained their *Quietus*.

Of a Procidentia Uteri, ac Prolapsus Vaginæ ejus.

THE next of the Distempers mention'd, peculiar also to the *female Sex*, is that vulgarly by Authors nam'd *Procidentia Uteri*.

It has been question'd by some, whether the *Womb* itself is capable of having its Inside turn'd outwards: And truly, in its natural State, by which I mean that wherein the Woman is not with Child, I think it scarce possible; its close, and usually contracted, Mouth, (by some compar'd to that of a *Tench*) by no means admitting its *Fundus*, or Bottom, to fall through: But at the time of Delivery, the Case is alter'd, and the Entrance, which before would not admit a Finger, affords now a Passage to the *Fœtus* and *Placenta*, and may perhaps therewith, tho' I believe very seldom, let thro' its upper Part; especially where the ignorant Midwife, pulling hard by the *Navel-String*, the After-birth adhering thereunto, contributes to the Misfortune, and renders the Case very deplorable.

Parey takes notice of a Fraud practis'd in his Time, by a *Shut*, who having blow'd up an Ox's Bladder, and smear'd the same over with Blood, by a Sponge fasten'd to the upper Part, introduc'd the same into her Body, which lying there for a little while, and, imbibing the *Illyvies* of those Parts, kept fast up: thus she went about begging an Alms, pretending her Womb was fallen out of her Body, and perish'd; 'till the Surgeons, coming to examine more narrowly into the Matter detected the Cheat, and sent her to Prison instead

instead of the Alms-house she was suing for, being hereby, as she pretended, unable to work. The like Roguery he tells us was practised by some Vagrants of our own Sex, artificially fastening a Sheep's Paunch to the Groin, and pretending their Guts were tumbled down.

But altho' this is a rare Accident, yet is it very common for weakly Women, not only after difficult *Child-birth*, but other laborious and hard Exercise, by which the *Ligaments* of the *Womb*, that is, the *broad ones*, have been distended, or by some Humour relaxed, to have the Body of the *Uterus* let down very low in the *Vagina*, its *Cervix*, or internal Orifice, appearing at the Entrance of the *Labia Pudendi*.

Paulus indeed denies the Body of the *Uterus* thus to prolapse. ' Yet in my Time, saith *Ander-nacus*, I have seen such an Instance, where the ' Womb itself, with its *Ligaments*, hung forth ' the *Sinus*.' *Dodoneus*, in his *Annot. on Beniven*, asserts he has observed the like hanging forth the *Privity*, as large as a Man's Head, under which the miserable Patient lived many Years, without Help: And this truly is the usual *Prolapsus Uteri*; that, for which it has been by some mistaken, being the *Extraversion*, for so I chuse to name it, or turning out of the inward *Tunicle* of the *Vagina*, or Sheath, whose Structure more favours the same: For being made up of many *Plicæ*, Folds or Wrinkles, the better to suit, not only to the Man's *Penis*, in the time of *Coition*, but to the large Body of the Infant at that of its Exclusion; and these *Plicæ* also besmeared always with a *glandulous* Liquor, much more in some *valetudinary* States; a Deluge of other Humours also attending, as in the *Fluores albi ac catamenia nimis abundantia* & *diu continuentia*, it happens that

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its Tone being hereby weakened, and the Spring of the orbicular Fibres of its Muscle at the Entrance destroyed (for here we find there is a *Sphincter*, as well as in the *Anus* thereto adjoining), a Relaxation attends, and the *Plicæ* aforesaid being obliterated, the internal Membrane falls through the *Privy*, hanging, if not supported by the String-Cloth, between the Woman's Thighs, for several Inches; which has given occasion to some, when finding the same distended by a Fluxion, appearing hard, round and globular, to fancy the *Womb* itself is, as they express themselves, now inverted.

This Disease, when of long standing is indeed difficult of Cure, and frequently admits of no other than *palliative*: Whether a Bearing down of its Body, beyond its natural Dimensions in the *Vagina*, through the weakening of its Ligaments, as aforesaid; or the Turning-out of its Sheath from its *Sphincter* being relaxed, and its rugous Coat unfolded.

In order to the remedying either Disorder, it is necessary, that the Patient give herself all the Rest that she can, avoiding more particularly the lifting or carrying heavy Burthens, much Walking or Riding, whether in a Coach about the Streets, or on Horseback out of Town; keeping still and quiet, either sitting, or, which is still preferable, lying in Bed: Altho' it may be otherwise injurious, by rendering her *cachectic*, and impairing that way her Constitution, yet will it forward more than any thing besides, the keeping up and resettling the weakened Parts: For as I very well remember a young Gentleman, who got rid of a *Rupture* by his Confinement under a broken Bone, being too active to have been restrained, unless from meer Necessity: So do I also
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the Case of a Gentlewoman, under this Infirmary, who, by the like Misfortune, keeping her Bed for about five Weeks, received more Help in retrieving her *Procidentia*, than from all other Means whatever she had used.

She must likewise avoid all *gross*, *phlegmatic* and *flatulent* Foods, or whatever, by an over *Humidity*, or *Unctuosy*, may relax and weaken the *Ligaments*, or membranous Parts of the Belly, by occasioning *Diarrhæa's* or other Fluxes; whilst her Diet is of like nature with what we have directed for the *Oedema*, *Anasarca*, or for those coming out of a *Salivation*, drying, and of easy Digestion: The *physical Regimen* otherways, being the same with that we have also before prescribed, for those labouring under the true *Hernia*, strengthening and conglutinating.

As for *Topics*, Plaisters have been directed by the Antients, to be worn forwards on the Region of the *Uterus*, as well as behind upon the *Loins* and *Spine*: Among the former kind, is a famous one in the *Old London Dispensatory*, but now obsolete, called by a hard Name, *i. e.* *μίστροπρόπρωτικόν*: of kin to this, and serving the same Purpose, are the *Emplast. de Mastich.* and the *Catagmaticum*.

Our modern *Physicians* now generally order *Galbanum* before, and *de Minio* and *ad Herniam* *p. a.* behind: But some Habits will bear neither, by reason of the Heat of the *Gums* inflaming the Skin, and bringing out of Pimples with great Itching; at which Times, leaving the Belly free, I have order'd for the *Spine* the common *Defensative*, *ex Diapal. cum Bolo, Aceto & Ol. Ros.* with the Addition of some other *Restringents*, such as the *Sang. Drac. Ter. Sigil. Bac. Myrt. &c.* which they have worn with Advantage, at least as they have thought themselves, and without Complaint.

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Among *Ointments*, the *Sumach*. of the same *Pbar-macopœia* was formerly also celebrated, in the like Weakness of these Parts.

Others recommend the *Suffitus* of certain *Gums*, as *Thus*, *Mastich*. *Benz*, with the *Nux Mosc. Fol. Ros. &c.* thrown over a Chafing-Dish of Coals, the Patient so placing herself, as to receive the Smoak thereof into her Body.

Others again, prefer the Steam of a Decoction received after the same manner, prepared from *Styptic* Ingredients, particularly the *Cort. Querc. Galle immat. Bac. Myrtil. Cort. Granat. &c.* in the *Smith's Water* with red Wine.

A late Writer, in the *mathematical* way, tells us, that these Remedies, particularly *Plaisters* and *Ointments*, are both trifling and injurious: But, with Submission, I must beg the Liberty to dissent from his Opinion.

All that they can effect, he says, *must be by their Stypticity, by which they contract the adjacent Fibres, whence the Juices will be driven in larger Quantity to the Vessels of the Womb, whereby Hæmorrhages and Abortions will be hastened, the very Misfortune they are intended to remedy.*

Which *Corollary* is, I think, not rightly deduc'd, at least, I am sure, does not correspond with Fact.

How a *Plaister* on the *Spine*, or over the *Loins*, should influence the Blood-Vessels of the *Womb* after such a manner, is not easy to conceive, unless they had more immediate Communication, with those of the outer *Teguments* of this *Region*: And then, if the *Diameters* thereof were thus constringed, there might be Danger of this *Plenitude*, rather *à parte ante*, than *à parte post*: But before they can reach to the *Spermatic* or *Hypogastric*, both Veins and Arteries, which furnish the *Uterus*, they must pervade not only these *Teguments*, but the *Lumbal Muscles*,

Muscles, and the *Rami Iliacs*, whence these Vessels take their rise.

Leaving this Enquiry, the Use or End that we propose by these *Topics*, and which we often find answer'd, (I believe our Opponent can give few Instances of a Miscarriage promoted by them) is by their kindly Warmth corroborating, as well as their restrictive Power *bracing* up the lax Fibres, if I may be allow'd to borrow a Phrase from these Gentlemen, whence the *Membranes* and *Ligaments* seated round about, particularly those of this Part, *viz.* the *broad ones* inserted into the *Ossa Ilea*, are invigorated and strengthen'd, together with that Part of the *Spinal Compage* they lie upon, as every one, whose *cutaneous* Texture will admit them, sensibly observes, and without which some Persons can no more dispense, through the Feebleness and *Aches* of these Parts, than others without the Support of their *Stays* or *Boddice*.

But, as before, waving Disputes, tho' I do not lay the Stress of a Cure upon these Remedies, yet I think them, as Auxiliaries, necessary to be continued, the like of the *Suffumigation*, both moist and dry, where the Woman is not with Child, which act by their exiccating Qualities, consuming the superfluous Humidities, constringing the Mouths of the *Glandules*, and giving a sort of Tensiry to the over lax *Fibrille*, by which they may be somewhat enabled to recover their enfeebled Tone, or to contract themselves and hold up the *Womb* suspended by them.

Whilst these are used, a *Pessus* of fit Length and Bigness must be introduced by the *Vagina*, to keep up its relaxed *Tunicle*, and to support the *Cervix Uteri* from sinking down through the same, which are kept close by the *String-Cloth*, or *T. Bandage*, being formed usually of some of the *Gums*, as the

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Sect. X. Of a Procidencia Uteri, &c.

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Ammon. Galb. Opopan. all comfortable to the *uterine* Parts, melted down, and formed into oblong Bodies, of the Length of a Finger, and the Thickness of a Thumb, being strung at the thicker and lower End, for the easier Extraction.

Some of the old Writers recommend the *Pessus* to be introduced into the Cavity of the Womb itself: Thus *Quentzius*, in his Epistle to *Ambrose Parey*, speaks of a Woman he knew, that carried one of them in her Womb for eight or ten Years; as also of another, in like manner, without hindrance of Conception. *Roussel* mentions a third, who used the same *Pessary*, in the Inside of her *Uterus*, for forty Years, unless at the Time of her Labour, when it came forth of itself; and after her Cleansing, it was put up again. *De Partu Cæsar. Sect. 6. Cap. 5, 6.* But to what End these are designed, I cannot readily comprehend; since, besides the Difficulty, at some Times, of introducing them, their Weight must rather increase the Subsidence thereof through the Sheath, than prevent the same, if they do not prove a Kind of *Stimulus*, as preternatural Bodies, to their own Excretion, and thereby keeping open the Mouth of the Womb, endanger Abortion, if a Conception should happen to form itself therein.

Now instead of the foregoing, as too weighty and cumbersome, I have usually, after well fomenting the outward Privity with the *restringent Fetus*, rolled up a Flannel hard of the like Figure, and dipped it in the hot Liquor, lightly squeezing it, thrust it up into the *Vagina*; after which, a Bolster, of the same, wrung hard and hot, on the Outside, for the farther Security, and strengthening the Parts, with the *Bandage* as before; which has well supplied the Place of the *Suffusus* and *Pessus* too.

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Whilst you are thus busy'd with your local Applications, the *Physician* must assist in mending or correcting the *phlegmatic* State of the Blood, and strengthen the Tone thereof, by some warm invigorating Medicines; among which, after suitable Evacuation of the *pituitous Saburra*, none exceed the *Bitters* with *Chalybeats*: Nor must you forget between whiles the *styptic*, *agglutinative*, and *balsamic* ones, we have before observed; as the *Terebinthines*, either from *Chio*, *Cyprus*, or *Strasburg*, made into Pills with the *Pulv. Rad. de Samphyto*, *Croc. Mart. Ter. Japon. Coral. Sang. Drac.* or the like, drinking after each Dose a small Draught of an *Apozem*, prepared of the *Simples* set down in the Cure of *Hernia*, to which, for avoiding Prolixity, I must refer, whilst I give you an Example or two of this Nature.

HIST. 61. A poor Woman, soon after a difficult *Child-Birth*, and hard Usage by her Midwife, complained of a great Weight and Bearing down, forwards, insomuch, that getting out of Bed, the Body of her *Womb*, as she thought, appeared outwards below the *Labia*, and still increasing, with great *Fluxion* and *Tumefaction*, in spite of all that several Midwives could do for her, at length stopping up the Passage of her *Urine*, she was recommended to a Man of that Profession, who told her, as she related after to me, that her *Womb* was turned out, and that he feared there was no Help; however, he directed a *Fomentation* to *stush* the Part, and advised her to apply to the *Surgeon*: Accordingly, having tried his *Fotus* without any Relief, the Disease still farther increasing, some of the Neighbours, in her Behalf, came to beg my Assistance.

I perceived the prolapsed Body, whatever it was, thrust out like a Pint-Bottle, with its short but thick

thick Neck upwards, hard and retinent, tending to *gangrene*; upon which account I scarify'd in several Places, and wrung a double Flannel out of boiling hot Claret, therewith surrounding it 'till I could get a *Fomentation* and *Cataplasme* prepared.

The next Day I was provided of a *Decoction* of some of the *discutient* with the *emollient Simples*; as the *Summit. Absinth. Centaur. Hyper. Fol. Major. Pulegij, Hyosciam. Laur. Malva, Verbasc.* with *Wood-Asbes*, the streined Liquor reserved for the *Fomentation*, whilst the *Magma*, being pulp'd, was boil'd up in some of the same, and thicken'd with *Farina Fabarum*.

After I had well *stupb'd* the Part, whence a large Gleet had issued forth from the *Scarifications*, I wrapped up the whole with a *Cataplasme*, adding about a Third of *Tberiac. Lond.* supporting it with her *String-Cloth*, and confining her strictly to her Bed, where, to fortify her Spirits, and dispose her to a gentle Breathing, she took a Morfel of the said *Tberiac*, in a Glas of *Canary*.

The Day following, I perceived the *Tumour* begin to relax, by the scattering her Water, which had been, in a manner, for a Week past suppress'd, and which, since the Night before, was almost constantly dripping from her, which, at the first opening, I took for Gleet, 'till I saw it trickling down from the top.

When I had bestowed about half a dozen of the hot Flannels, expressed hard from the *Fotus*, I renewed the *Cataplasme*, and found the *Tumour*, by the next Day, still farther subsided; insomuch that, by the Week's end, it began to appear flaccid, like an empty Bag, or like the *Scrotum* corrugating itself after the Dissipation of a *Hernia Aquosa*; so that, leaving out the *Emollients*, I added

some *Restringents* in their Place, as the *Cort. Gran. Flor. Balaust.* 'till at length I made use only of the *Cort. Querc.* infused in equal Parts of the Smith's Water and red Wine: And finding it would now give way, after like manner as we attempt the Reduction of a *prolapsed Anus*, wriggling it from side to side with a hot Flannel, I got it up, and perceived plainly that it was no other than the wrinkled inward Membrane of the *Vagina*, relaxed more especially on one Side thereof, and distended or inflated to so great a Bulk, the *Cervix Uteri* quickly shewing itself above.

So soon as I had thus reduced the Part, I put up a Cork *Pessus* wrapped in Silk, advising her, upon occasion of making Water, to draw it forth by the String, and introduce it again, as also to keep in her Bed for some Days; directing her the usual strengthening *gelatinous* Foods prescribed for *Ruptures*, particularly *Comfrey* and *Hartsborn* Shavings boiled in Broths: The dry Diet also of *Guajac.* to prevent the Redundancy of serous Humours in her Blood, strengthening its Tone, and giving some Springiness to the Fibres, that, by their *contractile* Property, they might be enabled the better to perform their Office; and in three Months I saw her about her Affairs abroad, entirely recovered of her former Weakness.

HIST. 61. An antient Gentlewoman, upwards of sixty Years, having long laboured under this Weakness, by supporting which with her Cloth, she made a tolerable shift to go about her House, after a Fit of Sickness, which had continued for some Weeks, and, by a Looseness attending, was brought very low, through a meer Deprivation of the native Heat in the Part; the *prolapsed Vagina*, hanging some Inches out of the *Pudendum*, was seized with a *Mortification*: It was the

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the first Case of that nature I had ever seen, being now thirty Years past; and therefore I thought it necessary to call some more experienced Artist than my self, for an Assistant, when that able and honest Gentleman, Master *Layfield*, then living in *Lime-Street*, met me at her House, and, examining the Condition of the Part, proposed Extirpation thereof by way of *Ligature*; which having streight concluded on, I took two strong Needlefuls of sowing Silk, and, waxing them together, passed them as high as we could reach, on the pendulous and putrid Body, making the Tie thereon; when, with a Knife a little below, I cut off the corrupt and stinking Part thereof; Afterwards fomenting those above with a strong *Lixivium*, and *Spir. Vin. Camph.* then melting a little *Bals. Terebinth.* and some of its Oil, together with a like Quantity of the *Tinct. Myrrh. & Aloes*, I armed a thick Wad of Tow, of the compass of a Crown-piece, with the *Ung. Ægypt.* and, dipping it in the hot Mixture, conveyed it close up to the remaining Part on which the Ligature had been made, with a *Stuph* expressed from the *Fomentation*, a dry one over that, secured by the T-Bandage.

After four or five Days thus proceeding, the *Mortification* being stopped, the rotten *Sloughs*, together with the *Ligature*, falling off, the Parts digested and deterged, I healed with an *Injection* prepared *ex Decocto Fol. Plantag. Equiset. Agrimon. Sannicul.* in a strong *Aq. Calcis*, adding $\mathfrak{z}\text{ij}$. of *Mel. Ros.* and $\mathfrak{z}\text{i}$. of a *Tincture* of *Myrrh* extracted in red Wine: after which she survived, free from any Complaint of the former nature, for fifteen Years, dying truly aged.

Ætius, Ægineta, Nic. Florent. Marcus Gattinaria, Carpus, Langius, Benivenius, Chryst. à Vega, Zacutus,

Paræus, besides *Roussetus* and *Baubinus*, have delivered Instances unto us, of the whole Body of the *Uterus* thus taken away, on the account of *Gangrenes*, either by Ligatures or Knife; the Patient afterwards restored to Health, tho' incapable of Conception.

But these learned Men might possibly mistake the Case, as I have already hinted, and as will be farther confirm'd by the two following Instances.

Soon after the last Edition of this Treatise, I was called on by Mr. *Freemoult* a Surgeon, the Corner of *Spittle-Yard* by *Norton-Fallgate*, to examine a prolapsed Body of this kind, in one of his Neighbours. The Woman was about forty Years of Age; and had, for several Years past, been exceedingly drain'd by a *White Flux*, which had so relaxed the Parts, that the Body of the Womb (as they represented it) first of all appear'd out of the *Labia*, which she could yet put up as she lay in her Bed, and made a shift, by a *suspensory* of her own Contrivance, to keep it so, in such Manner as to be able to go about her House.

She had consulted the *Men* as well as the *Women Midwives*, but without any Advantage. One of the former told her, indeed, that it was now a Case of Surgery, and out of his Way; for, by a late Fluxion, the Part was exceedingly tumefy'd and threaten'd a *Gangrene*.

Upon an Inspection of the prolapsed Body, it appear'd about the bigness and shape of a common *Melon*, the Flesh putrid or cadaverous, having entirely shut up the outward Orifice of the *Pudendum*, so that she had no passage for her Urine, nor had made any for some Days past, otherwise than by forcing up her Finger on one Side of the Swelling, when the same would gush forth.

It was with great difficulty I now made an Attempt to relieve her in the same Way, but having pass'd up my Finger, there sprang forth, together with her Water, a large Quantity of purulent Matter, as from an *Abscess* form'd above.

Upon the Discharge of this, finding it was to no purpose to scarify; in order to stop the Mortification, which was now got in a Manner through the whole Substance of the prolapsed Body, whilst the Surgeon lifting it up, and gently drawing the same towards him, with half a score Needles-full of Silk waxed, I pass'd as high up as I could on the Neck thereof, which was about the Thickness of a Child's Wrist, and making a second circular Turn round the same, gradually streighten'd and strangled it, as I found she could suffer the *Ligature*, which fastening by a slip knot, I left it so for two Days; after which finding the Body thereof considerably perish'd, being thus choak'd, by intercepting the passage of the Blood to or from the same, I then renew'd the Tye, compressing still harder, till the Neck was enclos'd to the compass of my Finger. The Day following, the Putrification and Stench growing insupportable, as well to herself as the By-standers, I resolv'd to Excise it; and having got an Apparatus of *Bole. Far. Trit. Acetum cum Alb. Ovorum*, in Case of any Flux of Blood; whilst the Surgeon, as at first, rais'd up and pull'd to him, I cut it off about half an Inch below the *Ligature*, where a small *Artery* spurted out, but was soon repress'd with the Dressings ready at hand.

Two Days after this, I found our Patient very hearty: and taking away the Dressings, perceiving no more Blood, I caus'd the outward Privy to be fomented with a Decoction of the hot Plants, and a little camphorated Spirit, whilst a soft *Pess-*

pus of Lint, dipt in warm *Liniment*, with a fourth of the *Bals. Tereb.* was apply'd close up against the Ligature, a Compress on the Outside, and the Strap coming up *inter Femora*, to secure the Dressings.

On the third Day after the Operation, there appear'd Signs of *Digestion*, our Patient was easy, and render'd her Urine as free as ever.

So soon as the Ligature was cast off, I order'd, in the Place of the Tent or *Pessus*, a vulnerary Decoction *ex Summit. Centaur. Hyperici, Agrimonia cum Aq. Hord.* to a Pint of which was added two Ounces of *Mel. Ros.* and half an Ounce of the *Tinct. Myrrh. & Aloes*, and thus in about three Weeks time the Cure was compleated, and the Woman restor'd to a better state of Health, than she had enjoy'd for some Years before: And to put the Case of the Procidentia Uteri (as it is commonly termed) out of dispute, was in about eighteen Months time after delivered of a live Child, at her full Reckoning, as Mr. *Starkey Middleton*, an honest and ingenious Practitioner in the Art of Midwifery, who was sent for, can bear Witness.

About two Years after this, *viz.* in *January 1733*, one Mr. *Cowling*, a Surgeon and Apothecary in *East-Smithfield*, desired me to go along with him and visit a poor Woman in his Neighbourhood, who he said had a most frightful Body of Flesh hanging down from the *Pudenda*.

So soon as I enter'd the Room, I smell'd the Stench, and coming to the Bedside, I saw a poor Creature with a Ghostlike Complexion, and Cold as if she had been lay'd out. When I lay'd my Finger on her Wrist, I could perceive no Pulse: Nor could she give but very little Account of herself, and that in a very low Voice, being in a Manner spent and dying away.

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I understood by the Women about her, that, for some Months past, she had suffered under a *Profusivum* of an other kind, *i. e.* the Menstrual, which had exhausted her Mass of Blood, and tho' she had consulted several, could find no Relief.

Some few Weeks before, they told me she had complain'd of the falling-down of her Womb, between her Thighs, and swelling so prodigiously, that she was now no longer able to be lifted out of her Bed.

When I had ordered all other Parts of her Body to be cover'd close with warm Flannels, the Bed-cloaths were turn'd down, and her Legs being extended, this large Cadaverous Body came into sight, whose stinking Gleet had gone through the Bed: And if I compar'd the former to the size of a Common *Melon*, this had more of the Resemblance of a large *Pompion*.

When I examined the Neck thereof, I found three parts already perish'd to my Hand, in so much that I told her Friends, I could free her from this rotten Lump of Flesh, without loss of Blood, and with as little Pain; but that I was doubtful if she could live over that Night, being so much dispirited by her Loss of Blood.

Preparing for the Work, whilst the Surgeon with his Hands on each side lifting up in a Cloth the prolapsed Body, and drew gently towards him, I made a Ligature, and still kept streitening with very little Complaint, 'till I had brought it within the Compass of my Finger, when without farther Hesitation, I took the Razor which lay by, and cut it off a little below the same; the Surgeon immediately bringing it from the Bed, put it into the Scale, and found its Weight six Pounds wanting a Quarter.

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Upon parting it from her Body, the upper Part, with the Ligature, retracted. We dress'd up dry, tho' there was no Occasion, for she lost not ten Drops of Blood.

I cut into the excised Body, and found it made up of a Congeries of larger and smaller Glands throughout, without Cavity or Fluid therein.

After this I took my Leave, not expecting to find her alive again; but the next Day Mr. *Corwallis* acquainted me she was, to his thinking, much revived, being warmer, and her Pulse, however weak, yet still perceptible. I had order'd her a warm Cordial upon taking my Leave the Day before, *ex Aq. Laet. Theriacal. Tinct. Croci, Sal. Vol. Ol. and Altbermes*, to be given by Spoonfuls, as they could get down the same; also a spirituous Fomentation, which, though it could not immediately reach the Parts above, might comfort them by the Steams, and correct the Putrifaction thereof. The Dressings were much alike with those for the former Patient, unless the Addition of a little *Oil of Terebinth.* to the *Liniment* and *Balsam*, in regard to the greater Degree of Rottenness therein.

The third Day from the Excision, I call'd myself, and saw her well fomented before she was dress'd up: When I could perceive very little of any offensive Smell. There appear'd Signs of Digestion, and the Woman was more hearty, taking now a larger Quantity of her Broths, and other simple Nourishment. The Dressings being difficultly retain'd, or spoil'd by her often needings to make Water, they were wholly left out; and a traumatick Decoction, in the way of Injection, substituted in Place thereof, as in the foregoing Observation thrown up by a Womb Syringe. I now desired the Surgeon to let me know when the Ligature was

cast off, which happen'd at the Week's end, or thereabouts; when quickly after, (as I had done in the former Case) I went out of Curiosity to examine the *Vagina*, where, with my Finger, a little above the *Meatus Urinarius*, I felt a sort of *Rugosity*, or callous Knot, which was doubtless the *Cicatrix*, left upon the Part where the Ligature had been ty'd; and still higher up, as far almost as I could reach, I found plainly (as I had done before in the former) the *Os Tincæ* and *Cervix Uteri*, in its proper Place: A plain Evidence, that the *Vagina*, or Sheath only, furnish'd the *Prolapsus* in both these Women; so that, as to the *Uterus* simply consider'd, they were both as capable of Conception after, as before the Extirpation of these Bodies. 'Tis indeed surprizing, not that the said Part should, after being thus deluged with a Flux of Humours relaxing the Coats thereof, turn out and hang down from the *Pudendum*; but that, in so short a Time, such a prodigious Mass of conglomerate Glands should sprout forth from the same.

What I would farther remark on these two Histories, is, that both these poor Women, upon their rising, labour'd under *anasarcous* Swellings; the first of one Leg and Thigh only, the other of both; which, considering the Rise thereof from the impoverish'd Condition of their Blood, I declined all *hydragogue* Medicines, unless a little *Tinct. Sacra* for the first of them, between whiles; placing the Strefs upon corroborating Remedies, such as might fortify Digestion, give a Spring to the Solids, and warm the Blood; for which End they drank the *Decoct. Lign. Guaiac.* Night and Morning, and a chalybiated Bitter before, and after Noon; by which, and a little Exercise as she was able, the former, who had been a regular Liver, in few Weeks time, got clear of the Swelling; whilst the other, who

who had been (as I was inform'd) a Dram-drinker, was, at the Time of penning these Observations, still incommoded thereby.

HIST. 63. A Maiden, under Twenty, from hard Work put upon her in the lifting up and carrying heavy Burthens, being subject to the *white Flux*, with great Weakness in the *Loins*, came in Company with her Aunt to ask my Advice for this *Prolapsus*: Upon stricter Enquiry, or Inspection of the Part, by opening her Thighs only, without dilating the *Labia*, I observed the flagging *Tunicle* of the *Vagina*, hanging out like a Gut about two Inches, but without *Tumour* or *Inflammation*; so that, by pressing at its Extremity, I could easily get it up to its Place within her Body, although, by walking cross the Room, it would presently appear out again,

She had indeed Youth, as they say, on her side; yet the Relaxation was of so long standing, and becoming so habitual, that I was not over forward to promise a Cure: However, I began my Attempt thereof, by strictly confining her to her Bed, where she continued several Weeks, and used constantly twice a Day to put up a Piece of Flannel of the Thickness, though not the full Length, of a Finger, rolled hard up, in the Place of a *Pessarrium*, or, as it is named for Virgins, a *Nas-calium*, first dipped and wrung hot out of the following Infusion:

R Cort. Querc. ʒi. Granat. ʒss. Gal. immat. ʒij.
Flor. Balaust. mss. Alum. Rup. ʒi.

Infunde coram igne vasc. co-oporto per boras aliquot in
Vin. Rub. auster. & Aq. Fabr. ana ℥ss. & reser-
vetur Colatura ad usum.

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She had always four or five of these *Nascols* ready at hand, with a Ligature at one end, by which to draw them forth, and shift them upon occasion; when after the introducing each, as she lay in her Bed, her Aunt assisting expressed also a double Flannel out of the same hot Infusion, and applied it close up to the *Pudendum*, for the farther strengthening the genital Parts, renewing them, as they grew cold, for several times.

I should have acquainted you, as a Thing very material, that before I directed these local Applications, she had been purged, as her Condition would allow, at proper Intervals, with a Decoction of the *Radix Rhei*, *Tamarind. cum Sale Tart. & Syr. Ros. Sol.* to lessen at least the *Cacochymy* in her Blood, and obviate any Mischief arising from the damming up the Humours below, in corrugating the Pores of the *Lacuna*, spewing out their Liquor, according to some, into the *Vagina*, or coarctating the *Cervix Uteri*, denying a Passage thence of the same, as others, and whilst remedying one Evil, laying Foundation for a greater.

During the Use of these *Topics*, for the farther strengthening the internal Parts, I now ordered the following *Mass* of *Pills* to be taken, as here directed, with the *Apozeme*.

℞ *Pul. Rad. Rhei. ℥i. Mastich. Croc. Mart. rest. Ter. Japon. ana ℥ ℥. Terebinth. Ven. ad duritiem coct.*
 & *Pulv. ℥ij. Bals. Peru ℥i. Tereb. Cypr. q. s. ut f. Mas. pro Pil. x. ad singulas drachmas, quarum quatuor vel quinque deglutinetur mane & vesperi, cum ℥iv. Decocti sequentis superbaustis.*

℞ *Rad. de Symphito ℥i. Tormentil. ℥ ℥. Plantag. cum Toto, Saniculæ, Bugulæ, ana m. ℥. coquantur leniter in Aq. Font. q. s. pro Colaturæ ℥i ℥. sub finem addendo Fin. Clar. ℥ ℥. & præterea postea Syr. de Symphy-*

*Symphyto, Syr. Bals. Tolut. ā ʒi. f. Apozema ad
usum supraordinatum.*

To the *Spina Dorsī* was applied a Plaister *ex part.
equal. Emplast. de Minio, & ad Hern.* from whence,
as she expressed herself, she found much Comfort
in raising her Body, and turning herself in Bed.

And thus, after about a Month or five Weeks
time, I permitted her to sit up therein a-Days,
and every other Night to get out of it for an
Hour, for near a Fortnight longer, gradually en-
larging the Time of her Stay, I gave her Leave
to rise in a Morning, and to move about the House;
having first provided her a couple of the *Nasca-
lia*, shap'd to the Thickness of my little Finger,
enclosed in *red Sattin*, and fasten'd at one end;
which, when she got up, she introduced and se-
cured by the T. 'till, in about three Week, per-
ceiving it did not come down when left out, and
finding herself stronger in these and all other Parts,
than formerly, she left them off, and never after
made any Complaint of that nature.

Before I took my leave, I ordered the following
corroborative Electuary, and *chalybate Bitter*, to
give, as it were, a Spring to the languid State of
her Blood, rendered still more *torpid* and *lentious*
by the want of Exercise; and to invite Nature to
do her Office by the *menstrual* Purgation, which
had been in a manner altogether suppressed, for
many Months past, and which indeed answered
every way our Expectation, as I understood some-
time after by her Relation.

*℞ Cons. Antibos. Absinth. Rom. ana ʒss. Pulv. Rad.
Ari c. N. Mosc. condit. ana ʒij. Syr. ē condit. zzzris
q. s. m. f. Elect. de quo capiat Quant. N. M. mane
& quin-*

Et quinta pom. superbibendo Cochlear. quatuor Julap.
sequentis:

Aq. Laet. Alex. Ceras. nigr. ana ℥iv. Absinth. mag.
C. Vini Chalyb. ana ℥i. Rad. Gent. incif. nodulo li-
gat. Et pbiala suspens. ℥i. Syr. Chalyb. 3℥. m. in-
star. Julapij.

And thus far of the *Prolapsus Uteri*, seu melius
ut Vaginae: As to the sinking of the Body itself
of the *Uterus*, by Relaxation of the Ligaments
foresaid, or when its *Cervix*, or Neck, falls down
the Sheath, and may be apprehended just within
the *Labia*, the same Method must be used, en-
suring Rest and Quiet, and putting up a *Pessus* to
support it, 'till the Ligaments, being strengthen'd,
be better enabled to hold it in its proper Place;
taking especial care, where the Weakness is pro-
moted by the *Uterine Fluor*, I mean the *white one*,
that due Regard be had, by suitable Evacuation,
to purge the *Cacochymy*, as we told you, and mend
the *cachectic* Habit, before you venture upon re-
fringent and agglutinative Remedies; lest otherwise,
the same being impacted, or shut up in the Glan-
dules of the *Womb*, or from the *Lacunæ* spew'd back
into the Mass of Blood, a *Schirrus*, and thence a
Cancer, seize upon the Part, or, at best a Transla-
tion to some other, to the greater Damage and
Hurt of the Patient.

A middle aged Lady, of great Worth and Re-
pute, after difficult Child-birth, fell under a
Weakness of this kind, which had been farther
promoted by an irregular Method in her way of
Life, as using no Exercise, of which she was
thereby render'd incapable, yet indulging her Ap-
petite in Food improper; whereby she contracted
a lax a Habit, that for many Months before I
was consulted, she had been never free from a
Diarrhæa;

Hist. 64.

Diarrhœa; under which, to support her Spirits, she had made too free with the richest Wines, and distilled Waters, together with the Use of *Opiates* a-Nights.

She had been just before under the Direction of an eminent Physician, who endeavoured to strengthen the *Tone* of her Bowels, by corroborating Medicines; whilst for the *Procidencia*, he advised a *Suffitus ex Thure, Mastiches, &c.* But these nothing availing, she was persuaded to send for me. The Case being first stated by her Spouse, who with much Importunity at length prevailed for my examining the Condition of her Body: in order to which, I desired she might be taken out of her Bed, and walk two or three Turns in her Chamber, after which, I touched the same, as she sat a little way over the Bed's-feet, and perceived not only a Relaxation of the *Vagina*, but the Cervix itself of the *Uterus* hanging out from the *Pudendum*. Having thus informed my self of her Disease, I immediately ordered a *styptic Fetus, ex Cortic. Querc. Granat. Flor. Balaust. & Fol. Rosarub.* in the steel'd Water and red Wine, much after the manner as in the foregoing Observation; and having prepared several *Pessaries*, (on the Management whereof the main Stress indeed lies at these times) of differing lengths and compass, covered over with Cotton, and faced with red Sattin, I gave Instructions for their use, passing up the first myself, as she lay along in her Bed when it was no difficult matter for her, with her own Fingers, to put up the prolapsed Body, but which presently fell out again, upon her rising out of the same: Wherefore I confined her entirely for a Month, assuring her it would be to little purpose, if she would not submit to such Restraint. Besides the *Pessus*, which was drawn forth by the String

String, upon occasion of making water, and again introduced; her Woman had a Charge to wring hot Flannels out of the said Infusion, and apply to the outward *Privy* over-night, for half an Hour; bringing up the Strap of the T-Bandage to secure it, with a dry Flannel over it 'till next Morning, when the *Pessary* was dipped afresh, and the *Fomentation* renewed.

Whilst these *Topics* were applied in this manner, in order to correct the Weakness of her Bowels, strengthen the intestinal Glandules, and corrugate their Fibres, without which I saw plainly I was not likely to gain my point, I purged her gently for three or four times, at as many Days distance, with the following *Haustus*:

℞ *Rad. Rhei tenuiter incif.* ℥i. *Tamarind.* ℥ij. *Cort. Mirabol. Citr.* ʒ ℥. *Nuc. Mosc. contus.* ʒi. Infunde in *Aq. Cinnamon. ten.* ℥iij. & *Colaturæ addendo Syr. Ros. sol.* ʒi. *Aq. Mirabil.* ʒ ℥. f. *potio.*

On the intermediate Days she took a Morsel of the following *Electuary* twice a Day, with a Draught of the *Apozeme* after it, of which she was to drink at pleasure.

℞ *Cons. Ros. Rub. Rad. de Symphyto a* ʒi. *Flaved. Aurant. condit.* ʒ ℥. *Nuc. Mosc. cond. Coral. Rub. pp. ana* ʒij. *Rhei parum tost.* ʒj. *Spec. Diamb. ʒ ℥. Ol. Cinnamon. Chym. veri gut. v.* *Syr. e condit. n. m. q. f. m. f. Elef.*

℞ *Electuar. superscripti* ʒj. *Extr. Thebaic. gr. ss. m. f. Bolus sumendus mane ac repetendus vespri.*

℞ *C. C. C.* ʒss. *Rad. Tormentil.* ʒss. *N. M. contus.* ʒi. *coquant. in Aq. Font. q. f. pro Colaturæ Hiss.* (sub finem addendo *Coccinel.* ʒi.) cui adde *Aq. Cinnamon. ten.* ʒvi. *Mirabil.* ʒij. *Sacch. Alb. chrystal. q. f. ad placitum m. f. Apozema.*

These Remedies were made the warmer, the better to reconcile them to her Stomach, which had been long used to strong Wines, and distilled Waters, that were now utterly forbidden, unless three or four Glasses of good red Wine, some part to be mixed with Water, at her Meals: For the same Reason, I mean her Custom with *Opiates*, the half Grain of the *Extract* was added to the Bole.

Before a Fortnight's End she was sensible of great Benefit, being now able to lie in her Bed a whole Night, which she had not done for several Months before, without rising three or four times to the Stool.

After this I left out the *Rheubarb*, adding some *Terra Japonica* and *Crocus Martis*, advising moreover the *Spaw-Water* for her Drink; when having corrected the sharp Humours in her Bowels, and strengthened their Tone, in order to mend the *cachectic* Habit she had contracted, she now entered on a *chalybeate Bitter*, viz. $\mathfrak{z}\text{ij}$. of the *Vm. Chalyb.* to $\mathfrak{h}\text{ss}$. of the *Infusum Amarum*; drinking hereof four or five Spoonfuls twice a Day, which fortified her Stomach, improved her Appetite, and brought her, notwithstanding this Confinement, to a much better and more hail Complexion.

At the Month's End I permitted her to rise, though still to keep in the *Pessus*, which being secured by the Strap, she walked about her Chamber without Complaint: and at six Weeks End, that, if possible, I might compleat her Recovery, I sent her to the *cold Bath*, which I have known to do admirable Service upon these Occasions; contracting all the Ligaments, and rendering the Fibres tense and robust, beyond all other Experiments whatever. Upon the first Essays, being much

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much intimidated, she complained of great Disturbance, which seemed chiefly *hysterical*; but, having good Resolution to conquer her Fears, she persever'd with great advantage, going in twice, and sometimes thrice, a Week, for several Weeks, desisting only at proper Seasons; and is, at the Writing hereof, in condition to ride about in her Chariot, having taken a Journey of forty Miles for her Diversion; and leaving off her *Pessus*, a *Cork Circulus* quilted now supplying the Place, which, being perforated, admits a Passage for her Menfes, and, passed up beyond the Duct of the *Uretbra*, she is under no necessity of drawing forth at the time of making water, although, for Trial sake, she has extracted it, without the Bearing-down she formerly suffered under: However, by way of preventing a Relapse, I have persuaded her to continue the said *Circulus*, at least for a Year's time.

Whilst this Lady was under my Care, a poor Woman was brought to my House, supported by a Neighbour, under the like Misfortune. Examining the pendulous Body, it appeared beyond the *Labia*, like a cupping Glass, with the broad End downwards; which at first I took for the relaxed *Vagina*, 'till, stooping down, I discovered plainly the *Os Tincæ* much widen'd, and, after Reduction, admitting my Finger very easily thro' the *Cervix*, into the Cavity of the Womb itself. She told me she had laboured under the Malady for above six Months, neither the Women about her, nor the Midwife, being able to help her. Her Thighs were much chafed by her Urine dribbling away, and her Clouts, as well as String-Cloth, wetted therewith. Having laid her along on a Couch, and, wriggling the Part gently from side to side, her Legs being spread open for that

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purpose, I got it up as aforesaid; and, shaping a Piece of Cork for the purpose, whilst she lay along, I instantly passed it up without other *Apparatus*, but the Thread drawn through, and hanging out of the *Pudendum*, bringing up her String-Cloth to keep it in; when directing them how to make a more suitable Bandage by the Strap, to use a *Fomentation* of the like kind with the foregoing, and to keep her Bed for some time, I called in a Fortnight to see this poor Creature meerly out of Charity, whom I found at her Tub washing of Linnen, which was her Livelihood; I carried along with me several of the *Cork-Circles*, perforated in the middle, and, taking out the *Pessus* I had formerly put up, convey'd in one of the largest: Since then I have seen her very hearty, she assuring me, that she had admitted her Husband several times, without Inconvenience, or withdrawing the *Circulus*; and that she had reason to believe she had lately conceived through the same.

Instead of the *Cork-Pessus*, an antient Practitioner in the Art of Midwifery, told me, he had contrived two Pieces of small Whalebone, each about three Inches; and crossing them in the Middle at the top, after he had cover'd them with a Piece of Sarsenet, and fasten'd them by a Needleful of Silk, he bent them into a double Semicircle, and then introduced it as high as he could reach against the *Cervix Uteri*, which by the Springyness of the Whalebone bearing against the Sides of the *Vagina*, was there supported and retained, there being no occasion (as in the *Pessary*) to extract the same for making Water, neither yet for Bandage to keep it in; the chief Care being to secure the Ends of the Whalebone by a little Cotton wrapt in the Silk Covering, at each

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Extremity, that they may not hurt in their Bearings against the Sheath.

Mr. *Edmund Chapman*, Surgeon, who hath lately published an Essay on the Improvement of Midwifery, once told me of an Accident, that had befallen one of his Women, from the wearing of a Ring, which was that of the *Os Tince* and *Cervix Uteri* slipping therein, and where it was so collar'd that a Mortification, from a Fluxion of Humour thereon, had ensued, if he had not by the Help of his Finger after the Use of an *Emollient Fetus* disengaged the same; which Misfortune might arise in all Likelihood from the over large Perforation in the *Circulus*, admitting the *Cervix*, when after turning Edgeways, both Pain and Inflammation might ensue thereon.

Whilst the Sheets of the first Impression of this Book were printing off, which was in *June, 1722*, a remarkable Accident, relating to this Subject, presented as follows.

An elderly Woman, having been for some HIST. 66. Years crasy, as well in her Head, I mean her Intellect, as her Body, and longer incommoded with a *Procidencia Uteri*, which she was forced to keep up with her String-Cloth, being otherwise scarce able to move about the House; under a Fit of Melancholy, was pondering how to free herself from this Inconvenience, and, unknown to any Person of the Family, taking her Opportunity, first putting herself in a suitable Posture, with one Hand she draws down the *prolapsed* Body, whilst with her Husband's Razor in the other, got as it were by Stealth, she excis'd all within her Reach; then, putting a Clout up to the Parts, she got into her Bed; where, after short time the Blood being discover'd, and she question'd about it, she very sedately told them what she had done.

Upon this a neighbouring Surgeon was sent for, who restrained the *Hæmorrhage* with proper *Refringents*: But in the Evening, the Flux being renew'd, he call'd me to his Assistance: When ordering a large Tent, like a *Pessus*, to be made up, the same was dipped in *Oxycrate cum Alb. Ovarum*, then gently express'd and roll'd over some fine *Bole*, particularly its Extremity, and so put up; next to this, a thick Pledget, or Wad of Tow, wrung out of the same, and sprinkled thick *cum Farina Fabæ*. with the T-Bandage to keep all close.

The Day following, the Blood seemingly stanch'd, a *Digestive* was got ready, into which made warm, a Tent like the first was dipp'd, and introduced: But coming the third Day, we found more Blood discharged, several *Grumes*, or Clots, following the Extraction of this last Application; so that we were forced to have recourse to our *Refringents*: And thus we continued for several Days, our Patient all this while calm, with little *Fever*, and as little Complaint, in regard to what might have been expected from so desperate an Operation.

When the Flux was stopped, and the external Privity cleansed, with a warm *Stupb* wrung out of Wine, we took a more strict Survey of the Parts, and dilating the *Labia* with my Fingers, in expectation of finding a Wound on the relaxed *Vagina*, could perceive nothing like it, all lying fair and natural within our Sight: When, entering my Finger as high up as I could reach, I plainly felt a large jagged or unequal Wound on the lower Part of the *Uterus*, whose *Os Internum*, or whole *Cervix*, had been cut off: The Blood, upon this Examination (tho' but in small Quantity) again following my Finger.

I then

I then enquired after the Part thus strangely taken off, which they shewed me put by in Water, and I perceived it, as I have represented, the upper Part an Inch and half deep, especially on each side, somewhat narrower in the Middle, and still less on the under Part, or that lying on the *Rectum*, which, for the Curiosity, I desired the Surgeon to put into *Spirit of Wine*, and which he still keeps by him, to gratify the ingenuous Enquirer with a sight thereof; of which number the first Person I shewed it to, was Mr. Petty, in *Fenchurch-Street*: But, proceeding,

After this Discovery, the Blood also entirely restrain'd, I advised a large Tent to be made up, as at first, whose upper Extremity was dipp'd in a melted Mixture, *ex part. iis, vel circiter, Linimenti Arcaei, cum quarta Ol. Tereb.* passing it up against the gaping Wound of the *Uterus*: I also advised a warm *Fomentation*, which we were shy of sooner, on account of the *Hemorrhage*, prepared *ex Decocto Fol. Absinth. Cent. Hyper. &c.* and a proportionate Quantity of the *Spir. Vin. campb.* to be applied with *Stuphs*, not only to the *Pudendum*, but reaching up to the lower Belly, which were renewed for half an Hour, Night and Morning, before the times of Dressing up, whereby to comfort the internal Parts thereof, cherish their Heat, and promote Digestion of the Wound; which, after ten Days, began to appear laudable upon the end of the Tent, and in moderate quantity.

After this, a *Womb-Syringe* was provided, and the following *Decoction* thrown in twice a Day, by way of Injection, to mundify the Wound: By its Situation I apprehended it less susceptible of an Impression of our *Balsams*, which were, however, still continued after the Use thereof.

℞ *Plantag. cum toto, Summit. Hyperic. Centaur. ana, m. j. Hord. Gallic. ʒ ℞. coquantur in Aq. Font. q. s. pro tibi. Colaturæ, cui per subsidientiam depurate adde Mel Rosar. ʒij. Tinct. Myrrb. ʒ ℞. & f. Mixture, cujus, metrenchitæ auxilio, injiciantur Cochlear. v. vel vi. per Sinum Pudoris, prius tepesacta, bis in die.*

This having been used for some Days, and the Discharge still lessening, I substituted the following, more consolidating and agglutinating.

℞ *Rad. de Symphyto, Plantag. ana ʒi. Fol. Hyperic. Equiseti, Sanicula, Bugula, ana m. ℞. coquantur in Aq. Font. q. s. ad ʒxij. Colaturæ, sub finem infundendo Vini Rub. ʒiv. & preterea Colaturæ superscriptæ addendo Mel Rosar. ʒij. f. pro Iniectione prioris instar utenda, sed sæpius in die.*

By which I have great Hopes her Cure may be accomplish'd: She now gets out of Bed, takes her Nourishment and Rest, the Discharge from the Wound being inconsiderable; and the same bidding fair for healing suddenly.

I think this is, if not the only Instance of the *ὕσπερατομία*, yet surely of the *Uteri Cervicis Abscessio*, I remember to have met with in our Writers of *Chirurgery*: At least I am apt to believe the first Attempt this way, for the Cure of its *Prolapsus*.

Of a CANCER of the Womb.

Of a Cancer of the Womb.

HAVING formerly made mention of the *Cancer*, I might inform you farther, that the *Uterus* is a Part subject to that cruel Distemper, to be known, if within the Reach of the Finger, by its stony Hardness; if not, by its cutting and acute Pains,

Pains, communicating by its *Ligaments* with the *Loins*, and especially the *Hips*, which, at these times, I have observed much affected. If the same is ulcerated, there are frequent and great *Hæmorrhages*, stinking, ill-colour'd, and putrid *Gleets*, flowing down by the *Pudendum*; which by degrees exhausting the Treasure of Life, and impressing a malign Taint upon the *nervous Fluid*, the miserable Woman thus daily pining, is at last freed by Death, the End of all our worldly Sorrow.

But I shall not waste your Time in giving farther Directions, in these Cases, than you will meet with in my Account of the Disease in general, at the End of my first *Section*, where you will find it set in a true Light; and tho' I have there given you one Instance of Success, I think it is all I have to boast of: I am sure I can safely say, I never yet met with one seizing upon this Part, that would admit of more than *palliating*, by *lenient Injections*, such as the *Succi Plantag. Sedi, Solani, Hyoscyam.* or a Decoction *ex Fol. Fragar. Equiset. Lactuce, Portulacæ, Viol.* or the like, with a little *Sal Prunel.* and *Syr. de Nymphæa*, or the *Mel. Ros. Mucilages* also of the *Sem. Cydon. in Aq. Plantag.* or a Solution of *Sacchar. Saturn.* in that of the *Aq. Sperm. Ranar.* a strict Milk-Diet being pursued in the mean time, or the *Almond-Milks* and *Emulsions*, formerly observed in our said *Section*; also *Anodynes, Narcotics* and *Opiates*, are both mixed at sometimes with the Liquors thrown up, especially two or three Ounces of the *Syr. de Meconio* to a Pint thereof; or a few Grains of the crude *Opium* well dissolved therein, whilst the Dose of either, taken inwardly, is proportioned to the Exigency of the Pain, and the Custom of long taking them, by which they become so familiarized

miliarized to the Spirits, as to produce little or no Effect, unless their Quantity be enlarged. And thus I have known some of these unhappy People begin with half an Ounce of *Syr. de Meconio*, and come by degrees to two Ounces; when the dire Complaint encreasing, refusing to give a Truce by these petty *Combatants* in their behalf, they have had recourse to the *sacred Anchor* of *Opium*, and from twenty Drops of its Solution in the *Liquid*, or one Grain of the *solid Laudanum*, have arrived to an hundred of the former, and four or five Grains of the latter, in the Circuit of a Night and Day.

Of the PROLAPSUS ANI.

Of the
Prolapsus
Ani.

The last *Disease* I shall here take notice of, (over-looked in the former *Sections*) tho' not peculiar to *Women*, yet in some measure related to the foregoing, I mean the *Procidentia Uteri*, is the *Prolapsus Ani*, or *Falling-down*, as it is named commonly, of the *Fundament*.

This Part is not only subject to *Fistula's*, of which in our sixth *Section* you will see an Instance or two; to *Hæmorrhoids*, observed in our Treatise *De Morbis Cutaneis*, among those incident to the Verge of the *Anus*, Chap. VII; to the *Cancer*, of which also here *Secl.* I; but the *Intestine*, or Gut itself, I mean its lower Extremity, from a Kind of *Paralysis*, or Resolution of its nervous Fibres, particularly those of the Muscles appointed to support the same, called *Levatores*, as well as the circular ones of the *Sphincter*, whose Office is to purse it up, after opening to let out the Excrements, suffers so great Relaxation of its rugous internal Coat, after the manner of the *Vagina*, as

to hang out of the Body: To which *Infants* especially, by reason of their soft and tender Habits, are more subject, when a Flux of sharp Humours, falling down upon these Parts, puts them upon hard and continual straining to get-rid of. Others also after long Sickness, being weaken'd by *Dysenteries* or *Diarrhæa's*, terminating in a *Tenesmus*, the acrimonious Humour now falling upon the *Sphincter*, like a *stimulating Suppository*, continually irritates the Fibres, as if something wanted to be discharged; whilst the Patient, in hopes of easing himself, sits over the Stool, straining, 'till in great Anguish, Fainting, and cold Sweats, being tired with his fruitless Endeavours, he gets up, perceiving nothing, unless a little Slime or *Mucus*, to come from him, with the End of the Gut thrusting forth from his Body, which it is not but with great Difficulty at sometimes, that he can after reduce; and, being put up again, enjoys but a short Quiet, before, the *Stimulus* returning, his Misery is renew'd.

Mr. *Wiseman* has handled the Diseases of the *Anus*, in a Chapter by themselves; such as the *Hæmorrhoids*, or *Piles*, with the several Excrescences about the *Fundament*, viz. the *Fici*, *Thymi*, *Condilomata*, &c. together with the *Fistula* and *Prolapsus Ani*.

But having, as now remark'd, discoursed of the two former in our Treatise above-mentioned, as well as where the same partake of the *venereal* Taint, in our *Syphilis*; of the *Fistula*, in this among the *sinuous Ulcers*; it remains only, that we give you some farther Account of the Cure of this *Procidencia Ani*.

Which is partly *Physical*, and partly *Chirurgic*: The *First* respecting the *Cause*, the peccant *Matter* to be carried off by lenient and gentle *Cathartics*,

tics, afterwards correcting or obtunding the remaining Juices, by those Remedies we call *Absorbents*, the *Chymists*, *Alcalious*, and leisurely constipating the Mouths of the intestinal *Glandules*, to prevent the ouzing forth of the serous Humour, by suitable *Restringents*: Lastly, and without which little Good can be obtained, for easing the Pain, and quieting the Irritation, *Anodynes* or *Opiates*, as the Case requires.

The *Second* regarding the *Effect*, by as gentle *styptic* and *discutient Fomentations*, to resolve the Humour fallen down on the *Intestine*, and strengthen the muscular *Fibres*, that they may be enabled to retract themselves, and, constringing their *Sphincter*, prevent Relapse.

To the same Purpose serves the *Suffitus*, made mention of in the *Prolapsus Uteri*: *Cataplasms* also, as the Case may call for, prepared from those *Decoctions* thicken'd with *Farina*, and sprinkled over with *restringent Powders*; as the *Pulv. Rosar. Rub. Balauft. Cort. Granat. &c.* and, instead of *Suppositories*, which, however mild they may be, are still apt to irritate to Expulsion, *Injections Clysterwise*, but in small Quantity, as the Case stands, either to appease the Pain, sheath the Acrimony of the Humours, and heal the Excoriations; or moderately to exsiccate and corrugate the lax *Fibres*: Of the former sort are the *Ol. Lini, Hyper. Papav. cum Lacte Vaccin. ac tantillo Theriac. vel Diascord.* also the *Mucilages ex Sem. Malvæ, Plantag. Papav. Cydon. in Aq. Hord. cum. Mel. Rosar.* Of the latter a strong *Tincture* of *Rose-Leaves, cum Syr. eorundem Siccorum*; a *Decoction* also of the agglutinating and *restringent Simples*, such as the *Rad. Tormentil. Bistort. Fol. Alchymil. Plantag. Equiset. Auricul. Muris, Burs. Pastor. &c. cum eodem melle Ros.*

medicinal but instead of the berries of the In

In the Use of which latter more especially, the following Cautions may be necessary, *viz.* That you by no means throw up these *styptic* Liquors where there is great Pain, and the Gut excoriated, or its *Mucus* shaved off by the sharp Humour, before the same is appeased, and the *Ulceration* cicatrized; for this would be as preposterous, as the going about to *deterge* any other *Ulcer*, before its *Digestion*, or *cicatrizing* before the same was *mundify'd*; at these times the *lenifying*, *demulcing* *Mucilages* and *Oils* being the most fitting.

Farther, that the Quantity of your *Clyster*, or *Injection*, exceed not at these times a Quarter of a Pint, which is usually sufficient: For otherwise, by their Bulk impressing the *Intestines*, they will presently be thrown out again, contrary to the Intention, which is to lodge for some Hours, and, like a *Fetus*, to comfort, assuage the Pain, and take off the *Stimulus*.

To return now to the *physical Regimen*, which regards the *Cause*, in purging off the offending Matter: The *Cathartics*, best fitted for this Purpose, are the *Rad. Rhei*, *cum vel sine torrefactione*, *prout fluxus magis vel minus postulat*. The former may be exhibited either infused, or in Substance; the latter in Substance only, made up into a *Bolus* with some *Conserve*, as that of *Roses*, or the *Confect.* of *Fracastorius*, prepared without Honey, ℞ ss. to 3ss. *Fruet. Tamarindi*, *Mirobal. Citrin.* a Form of which I shall here insert, *viz.*

℞ *Rad. Rhei tenuiter incis.* ʒi. *Tamarind.* ʒij. *Cort.*

Myrobal. Citrin. ʒss. *Sal Tart.* ʒss.

Infunde coram igne paulisper, deinde stent simul per noctem in Aq. Cinnamon. Hord. ʒiv. Et *colatura claræ adde Syr. Ros. sol.* ʒi. m. *pro potione lenitiva, sumenda mane cum levi custodia.*

This

This is to be repeated, as occasion requires, once in two or three Days.

The *Absorbents* are the *Corn. Cerv. calcinat.* of which the common *Apozeme*, from its Colour called the *White Drink*, is prepared with a Stick of *Cinnamon*, and a Crust of Bread, edulcorated with double refined *Sugar*, for their constant Liquor; the *Creta Alba*, and *Coral. rub.* to which are added others, both *absorbent* and *restringent*, such as *Bolus verus*, *Terra Lemnia*, *Sigillata*, *Japonica*, as among the Compounds, the *Confect. Fracast.* before mentioned, and that *de Hyacintho*, *Milk* and *Water*, *Rice-Water*, *Claret-Wine*, and *Steel'd Water*, are also allowed between whiles.

Anodynes and *Opiates*, as the Pain and Frequency of going to Stool shall indicate, are here also to be prescribed.

A *Process* for all which, as the Symptoms vary, for the Benefit of young Practitioners, in the Absence of a *Physician*, or where his Counsel cannot be had, you may collect from what follows.

Having given the lenient Potion above directed, or the *Bolus ex Rheo, cum Diascordio*, on the Days intermediate, the *Flux* yet continuing, the following *absorbent Electuary* and *Apozeme* may be directed:

Rx Conf. Rosar. ʒ ss. Diascord. s. m. ʒij. Creta alba purif. Coral. rub. pp. a ʒi. Ter. Japon. ʒ ss. Syr. de Mecon. q. s. m. f. Electuarium, de quo capiat Quant. n. m. mane & vesperi, superbibendo bausulum calefactum vel saltem tepidum, decoctis sequentis, cujus bibat ad suum loco alterius potulenti, vel ad libitum.

R C.C.C. ʒij. Nuc. Mosch. concus. ʒ ss. coquantur in Aq. F. q. s. pro Colatura ʒi ss. addendo sub finem Coccini.

Coccinel. contus. ℥i. Colaturæ per cribrum trajecte adde Aq. Cinnamon. ten. ℥ij. Sacchar. albiſſimi q. ſ. m. ſ. Apozema.

In caſe of Pain, as is frequent in the *dyſenteric Prolapſus*, with Gripes and bloody Stools, half a Grain of *Laudanum*, or a Grain, muſt be added to each Morſel of the *Eleot.* or the following Draught towards Bed-time, for promoting Reſt; the Doſe of which, as we formerly obſerved, when diſcourſing of theſe Remedies, muſt be proportioned to the Senſe of Pain, and Frequency of its Returns; having regard however to the Strength of the *Pulſe*, the *Age*, *Sex*, and *Conſtitution*.

R. Aq. Flor. Paralyſ. ℥i. Epid. Syr. Cydon. ā ℥ij. Laud. liquid. Cydon. gut. xx. m. ſ. Hauſus.

Forms of *Injections*, Clyſter-wiſe, may be taken from theſe which follow: As, *firſt*, if there be great Pain, with Ulceration of the *Inteſtine* attending, or where its *Mucus* is ſhaved as it were away, by the ſharp Humours falling down;

R. Caput Ovillum cum languine confractum, & ex empto cerebro, Rad. Symphyt. ℥ij. Sem. Malvæ, Plantag. & Papav. alb. ā ℥ij. coquantur in p. æq. Lact. Vaccin. & Aq. Font. ℥iv. ad conſumptionem dimidiij, & coletur.

R. Hujus Colaturæ ℥iv. Mel. Roſar. ℥i. m. ſ. inſtar Enematis, ope Syphonis tubulo proprio adaptato, vel Veſicæ armatæ in anum injiciend. renovand. bis in die. Vel,

R. Mucilaginis tenuioris Sem. Cydon. in Aq. Flord. Extr. ℥iv. Mel. Roſar. ℥i. eodem modo utendum.

When the Pain is ſomewhat aſſuaged, and the Ulceration diſpoſed for healing;

R. Plantag.

Rx *Plantag. cum Toto, Equiset. a Mj. Fol. Hyperic. Cynogloss. Pilosel. Scabios. Bugul. sanicul. a mss. coquantur in Fuscule tenuis ex Capit. Ovil. fact. q. s. ad ℥ij. Colaturæ cuius inijce eandem Quant. bis in die, cum Syr. de Rosis siccis ℥i.*

If there be more Laxity without Pain or Soreness, you may throw up the like Quantity of a strong Infusion of Oak-Bark, Pomegranate-Rind, Balaustines, or the Tincture of Rose-Leaves, with its Mel or Syrup.

To take off the *Tenesmus* usually attending at these times; and which indeed, by the hard Straining occasioned thereby, more than any thing increases this Disease.

Rx *Decoct. Albi ℥iv. Conf. Fracast. ℥ss. Terebinth. cum Ovi Vitello solut. ℥ij. m. pro Enemate: vel, R. Vini Canariens. ℥iv. Theriac. Andr. ℥ss. solve cum Vitello Ovi & f. Enema.*

And note, that all Injections are to be thrown up only Blood-warm, lest, by their greater Heat, Pain with Inflammation be stirred up; or, being quite cold, Gangrene and Mortification.

In the mean time, let the Surgeon take care of the prolapsed Intestine, endeavouring to discuss the impacted Humour, with hot Stups wrung out of a Decoction of the *Folia Malvæ, Verbasci, Flor. Chamomel. Melilot. Summit. Hyperic.* to which, as we have already taken notice, may be added some gentle *Styptics*, as the *Fol. Rosar.* And, after Reduction, the *Emollients* must be wholly omitted, and the *restringent Decoction* of the *Cort. Querc. Granat. &c.* applied close up to the *Anus* with hot Flannels, and there secured by the common Bandage, in order to purse up the *Sphincter*.

But if the Intestine be so relaxed, and withal tumefied, as that you can by no means of lightly pressing

pressing from one side to the other, with your Fingers upon the warm Flannel, reduce it to its Place within the Body; having well fomented the same with the *discutient* and *emollient Fomentation*, to relax the *Induration* and resolve the *Tumour*, you may thicken a Part of the Decoction either with the Crumbs of white Bread, or the *Farina Fabar.* and apply to the prolapsed Gut, first sprinkling over it the *Pulv. Boli vel Rosar. sicc.* 'till, the Folds thereof softening and giving more way, you are enabled to accomplish your End. After which it will behove the Patient to be very cautious at his times of Needing, to moderate his Straining or pressing downwards, with his Fingers round about the Verge, endeavouring to keep up the *Anus*, whilst his Stool is discharging, at least with a hot Flannel wrung out of red Wine, to be ready at hand at such times; pressing gently, and wriggling from side to side, 'till finding it passing, by holding his Breath and pursing up of his Body, he will both facilitate the Return, and secure the Part from Relapsing, clapping a *Stupb.* strongly express'd from the hot Wine, or some other *stiptic* Liquor, close up to the Fundament; and keeping it there for some time.

Mr. *Wiseman*, I think, proposes a perforated Plate of Tin, of a fit Size, held tight to the *Anus*, at the time of going to stool, so that there may be a Conveyance thereof, without suffering the *Intestine* to come down therewith: as also a Couple of small square Pieces of Stick, to be kept there, with the Fingers on each side at those times, and for the like purpose: But I never found that either of these Experiments have answered, the Gut still, from the Irritation, or Force of the *Tenesme* overcoming the Pressure, and slipping down between: So that one great Matter to be

observed in these Cases is, doubtless, to bring the Body to such a Mediocrity, with regard to his Stools, as that on the one hand he be not too costive, or ty'd up, by which over-straining the same, the *Sphincter* would force down; or on the other, being over lax, the Fibres also weaken'd, through their want of due Tensity, will be afterwards capable of corrugating, or shutting up thereof.

HIST. 67. A Girl, about fourteen Years of Age, had the most formidable *Prolapsus*, of this kind, I ever met with: It had been down for some Weeks past, coming after a Worm-Fever, attended with a Looseness. The internal Tunic lay out in hard Folds, like the *Præpuce* of a strangled *Glans* under a *Periphymosis*, tumefy'd, inflam'd, and strutting out to the Compass of a clench'd Fist, discharging a bloody Gleet; with *mucous* Dejections issuing down between, and tending to *gangrene*. Before I was call'd, there had been a *Pretender* to Art to view the same, who had declar'd it *cancerous* and incurable; which terrifying the Parents, they consulted me, who gave my Opinion, that the Disease was no other than a meer *Prolapsus*, or Falling-down of the Fundament; however, through Neglect, now tending to mortify, and the Child's Life in Danger. Desiring my Assistance, I presently scarify'd lightly the discolour'd Parts, applying a Flannel wrung out of Claret made almost boiling hot; after three or four of which I sent for some *Theriac. Lond.* to the next Apothecary's, and laid it on hot all over the Part, bringing up the T. and fastening it before the Belt; with a Needle and Thread drawing up the opposite Part of the Strap like a Bag, for receiving the pouting Gut with the Dressings, and securing thereof; providing, against the Evening, the following Decoction to be made use of as a *Fotus*.

R. Summ.

R^y Summit. Hyperic. Centaur. min. Malvæ, ana m. i.
 Flor. Chamomel. Melilot. Sambuc. ana mss. co-
 quantur in Aq. Font. q. s. ad Colaturæ ℥ii. ad-
 dendo inter amovendum ab igne Vini Rubri ℥ss.

About a Third of the Colature was thicken'd with Bean-Flower, and apply'd (after the Part was well fomented) as a *Pultis*; having us'd this for some Days, the *Tumour* discuss'd, and the *Sloughs* began to loosen, which, before the *Cataplasm* was supply'd, I slightly dabb'd with an arm'd Probe dipp'd in a hot Mixture of *Mel Ros.* & *Tinct. Myrrb.* ʒi. of *Mel* to ʒii. of the *Tinct.* and about ʒi. of the *Mel Unguent. Ægypt.* Yet notwithstanding, so great Hardness still possess'd the Folds of the prolaps'd *Intestine*, that it was impossible to pass it through the Stricture above; upon which I try'd to soften it, by bathing as before with warm Flannels, express'd from the *Decoct. ex Rad. Alb. Fol. Verbasc. Branc. Ursinæ, Mercurial.* together with *Discutients*, viz. the *Flor. Chamomel. Melilot. Sambuc.* with a small Quantity of the *Fol. Ros. rub.* to give some light Restrigen-
 cy thereunto, and strengthen the Parts.

These were boil'd in Milk and Water, some Part, as before, being thicken'd with *Farina*: And thus after the third Day taking off the *Pultis*, and feeling the Parts softer, with a *Stupb* wrung hot as she could suffer it from the *Fotus*, I began to press gently for fear of hurting the Part, and wriggling it from side to side, passing up a little Portion at a time, I found it giving way; so that maintaining the Ground I had got, I persuaded the Patient to draw up or contract the *Sphincter* as well as she could; which, however, by continuance of Time, thus thrust out of its Place, was much weaken'd in its Tone, yet at length slipp'd up at once. Upon which I took a soft

Piece of new Flannel, and dissolving a Bit of *Roach Alum* in a little red Wine, dipp'd the same several times doubled in the Form of a Compress, and pressing out the Wine, directed it close up to the Fundament, with a dry^e one over, and the Strap of the T coming up before to secure it; giving Orders for its being renewed two or three times in twenty four Hours, and to give Notice to me (if it happen'd seasonably) when she went to stool, that I might help her upon Occasion.

The next Day I provided the following *Fotus*, for the farther strengthening of the *Sphincter*, and securing its *Relapsus*, to be used as the former, only shifting them as they grew cold, for half an Hour, Night and Morning, and after each Time of her going to the Pot, or Stool:

℞ *Cort. Querc.* ʒj. *Granat.* ʒij. *Gal. immat.* ʒj. *Flor. Balaust. p. j.* *Alum.* ʒ ss. *Infunde super Cineres calidos per xii horas, in Aq. Chalyb. & Vin. Rub. austeri, ana p. æ. q. s. pro Colaturæ ℥j ss. quæ reservetur Usui instar Fotus.*

In the mean time, as the *Sphincter* contracted, to correct the bilious and acrid Humours, still apt to flow down with a *Mucus*, I order'd her every Night to take the following *Bolus*, with a Draught of the Hartshorn Drink; to which, and the Chicken or Mutton-Broths boil'd with Rice and a Crust of Bread, she was kept through the whole Course;

℞ *Conf. Fracast. s. m.* ʒ ss. *Pulv. Rhei torrefact.* ʒ ss. *Cinnamon. acut. Pulv. gr. r. Spr. de Mecon. q. s.*

And after every loose Stool she took two or three Spoonfuls of this *Julep* with *Absorbentis*, shaking the Glass.

℞ *Aq. Ceras. nigr. Cinnamon. Hord. ana ʒiv. Sacchar. Albi crystal.* ʒij. *Cretæ alb. puriss. Coral. Rub. pp. ana ʒj. m.*

For the like Reason, as the *Diarrhoea* had been of long standing, to prevent any Mischief by the sudden Check thereof, the following lenient Potion was given once in four or five Days, for as many times, which manifestly strengthens the intestinal Fibres, as at the same instant it gently empties the peccant Matter, and is, in all these kinds of Fluxes, whether *Lienteric*, *Dysenteric*, or the common *Looseness*, very profitable.

R̄ Rad. Rhei tenuiter incis. ʒj. Tamarind. ʒij. Cort. Myrobal. Citrin. Cinnamon. acut. confract. ā ʒ ʒ. Sem. Plantag. p. j. Infunde calide in Aq. Laet. Alex. ʒiij. Colaturæ claræ adde Aq. Epid. ʒij. Syr. Ros. solut. ʒj. & f. Potio.

By this *Regimen* she gradually recover'd, tho' I was several Times sent for after her Needings, to put up the *Intestine*, which was now accomplish'd with little Trouble, and at last would go up again of itself.

She thought she received great Comfort also, by sitting over the following *Suffitus* every Night for a quarter of an Hour, the Powder being sprinkled on a Chafing-Dish of Coals put into the Case of a close Stool;

R̄ Mastich. Thuris, ā ʒi ʒ. Cort. Granat. ʒj. Nuc. Mosc. ʒ ʒ m. f. Pulvis in tribus Chartulis.

To take off the *Tenesmus*, or Provocation, so soon as the Gut was reduced, they threw up every Night half a Dozen Spoonfuls of Canary, with a quarter of an Ounce of *Conf. Fracast.* and the Yolk of an Egg. After this she enter'd upon a Milk-Diet with *absorbent* Powders, and was freed from her *hectic* Fever, by which her Life, for some Months past, seem'd to be in very apparent Danger.

When this *Prolapsus* befalls young Infants, the Case is yet more troublesome, for that, instead of helping themselves by moderating the Straining, they force out the Part still more violently through the *Irritation*, and thereby sometimes oppose all Endeavours for the Reduction, 'till the same is appeased by proper *Fomentations*, apply'd as above directed; or, being tired out with the unnatural *Conatus*, are forced to give over, and the Surgeon, taking his Opportunity, succeeds better in the Attempt, by the Method above directed, preventing a Relapse, unless, as at sometimes, *Nature* being quite spent through the Flux attending, the prolaps'd Gut is affected with a *Gangrene*, and the Patient carry'd off thereby.

And thus, Gentlemen, I shall put an End to these *Chirurgical Discourses*, in which if I have been less accurate in the laying down my *Definitions*, *diagnostic* or *prognostic* Signs, as well as Method of *Cure*, than some of my *Predecessors*; yet, if in the whole I have given such Hints as may serve to constitute a *general Idea* of our *Art*, it is all that I propos'd to myself, or indeed promised you at my first setting out.



ASUPPLEMENT to the *Discourse of WOUNDS*, containing some *Histories of those which have been commonly deem'd Mortal.*

WE have already, GENTLEMEN, gone thro' our Discourse, not only of *Wounds* in general, but those also of the particular Parts, together with

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with their *Diagnosics* and *Prognosics*, as well as Cure; among the latter reciting some which have been usually accounted *mortal*; as of the *Brain*, *Heart*, *Lungs*, *Diaphragm*, &c. Where we then observed to you, that even these are not without an Exception: For Proof of which, I have been at the Pains of examining many of our antient as well as modern Writers, for Instances to confirm the same; which I have set down, not so much to embolden you with a Presumption of the like Success, in all your Undertakings of that Kind, (for that would be a degree of Madness,) yet to encourage your utmost Endeavours for relieving the Miserable committed to your Care, by no means abandoning any of them, how seemingly desperate soever their Wounds may be; since, as you will find in these Examples, a lucky Incident may happen, by *Eucrasia*, or good Habit of Body, the Balsam of his Blood, the Robustness of the muscular Fibres, or, in a Word, what we call Strength and Vigour of Constitution. Nature, which is always assisting to the Preservation of the animal Fabrick in each Individual, brings very surprising Things to pass; and, being rightly assisted, snatches poor Mortals at sometimes, as it were, out of the Grave, or, in the vulgar Phrase, from the very Jaws of Death.

Before I enter on Particulars, I will insert that *Aphorism* of *Hippocrates*, the great Oracle of Physick, relating hereunto; by which you will easily apprehend it is not absolutely to be understood, or taken otherwise than as a general Rule, admitting of Exception.

Cui (inquit) perfecta est Vesica, aut Cerebrum, aut Cor, aut Septum transversum, aut aliquod ex Intestinis tenuibus, aut Ventriculus, aut Hepar, Lathale.

That I may observe some Order in the subsequent Histories, I shall not tie my self to the

Of Wounds of the BRAIN.

Words of the *Aphorism*, but chuse rather to begin with

The Wounds of the BRAIN.

AMONG which, besides the foregoing of our own, *Bertapalea*, speaking of the *Fractures* of the Skull, in his Vth Chap. tells us of a Countryman he recover'd, after Loss not only of the *cortical*, but great Portion of the *medullary* Part also of the Brain.

Nich. Massa, of another Wound, with a Sword, into the Substance of the said Part, *vel super verticem, usque ad medium capitis*, as he expresses it, being seized the next Day with an universal *Paralysis*, his Excrements coming from him, took nothing for six Days into his Stomach, yet after had the good Luck to escape.

The same Author affirms, he had seen another wounded in-like manner, but in several Parts of the *Cranium*, each also fractur'd, with Laceration and Loss of Substance of the Brain: At the same time his left Hand was in a manner cut off, hanging loosely by the outward Teguments; whence great Effusion of Blood. Being taken up for dead, as void of all Sense and Motion, he was carry'd to the Church in order to Interment; where being perceived to stir, having due Care taken, he was as it were restor'd to Life, and recover'd of his Wounds, his Limb also agglutinated by proper Applications.

Carpus, in his golden Tract *De Fractura Cranii*, assures us, upon his own Knowledge, of six several Persons, from whom great Portions of the Brain discharged, yet were restor'd; some of them however not without the Loss of one Side, or *Hemiplegia*, ensuing thereupon; of which he calls upon
many

many eminent Physicians for his Witneſſes. One of them more particularly, had a Piece of the Inſtrument lodged in the Brain, for a whole Day, of four Fingers length, which being, as it were, bury'd in the Subſtance thereof, was not without Difficulty drawn forth; a *Cannula* being introduced for ſixty Days, to diſcharge the Matter: About which Time the Patient was ſeized with a ſtrong *epileptic* Fit, great Rigours accompanying. Whereupon the Wound being enlarged, and Way made for a thin milky Matter to empty itſelf thereby, the Convulſion went off, and the Sick was retriev'd, even contrary in a manner to his own Endeavours, as might be ſaid, to deſtroy himſelf: For, as our Author calls God to Witneſs, the headſtrong Patient ſwore to him, after his Recovery, that he had carnal Knowledge of a Maid-Servant in the Houſe, every other Night he had been under Cure; and drank three or four Glaſſes of *Malaga* Wine each Day. Another of them, he obſerves, under the like deplorable Circumſtances, got frequently out of Bed a Nights, and taking raw ſalted Meat from the Powdering-Tub, without waſhing, would broil it on the Coals, and thus indulge himſelf, after which he cramm'd down great Quantity of Bread and Honey, gotten alſo by Stealth; glorying after of theſe Exploits, when ſome of the ſaid Viands were diſcover'd under his Bed.

Guido makes mention of a *Fracture* of the *Cranium*, where there was great Loſs of the Brain, together with that of the Patient's Memory, during the Cure, but after retrieving it.

Theodoricus, of another, where the Subſtance of the whole Ventricle iſſued forth. But theſe Caſes, as *Jacotius* in his *Comment. ad Aphor. 15. lib. 1. Sect. 3. Coac. Hippoc.* are ſuch, *Quæ potius voluntate Dei, quam arte evenient*; and which will not, in his Opinion,

Opinion, subvert entirely the *Apborism* of that great Man, before quoted.

Brassavola, in his Comments on the same Author, assures us, that he has been an Eye-witness of wonderful Things in these Wounds. One, particularly, where as much of the Brain as would fill a Hen's Egg ran out of the Wound; which was healed, altho' the Patient was left an Idiot thereby, not being able to pronounce a Word plain.

A Soldier also at *Corfica*, he makes mention of, *Cui fere dimidium* (inquit Author) *capitis, cum sui cerebri portione ablatum est; tamen convaleuit*. However, like the former, losing his Senses.

The forenamed *Massa* affirms, in the most solemn manner, and calls on many living Witnesses to attest the Cures performed by himself, where large Quantities of the Brain came forth at the Wound: Among which, says he, there is at this Time living, that noble *Venetian*, *Paulus Raymundus*, as also the magnificent *Marcus Goro*: The former wounded with a Sword on the Back-part of the Head, by the *Lambdaide Suture*, breaking thro' the *Cranium*, and entering the Breadth of three Fingers into the Brain, a Piece of the former being entirely carried away, and the most threatening Accidents attending. The latter, with an Halbard forced thro' the Bone, and entering the Brain *usque* (says he) *ad Os Basilare*, carrying also some broken Fragments of the *Cranium* along with it; which, being overlook'd by the first Surgeons, were after by him extracted; when the young Nobleman instantly recovering his Senses, to the great Surprise of the Senators standing by, cry'd out, *Ad Dei laudem, nunc sanus sum*. Notwithstanding which, by trespassing in his Diet, eating *Caveare*, he relaps'd into the utmost Danger, having furthermore sundry *epileptic Fits*, occasioned by Matter lodged on the

said

said *Basilare*, which could no otherways be cleansed than by a Pipe, or *Cannula*, let down for that End, of a Finger's Length, into the *Sinus*, thro' which the Patient holding strongly his Breath, three or four times a Day, by shutting close his Lips and Nostrials, the Matter was seen to rise, and issue out thereby on the Top of his Head, in large Quantities; [The Case of one of my own Patients.] Which being thus gradually empty'd, after each Dressing, was instill'd a Mixture of two Parts *Aq. Vitæ*, with one of *Mel Rosar.* when re-entering the *Cannula*, an *Emplast. de Betonica* was laid over on the Outside: Which *Cannula*, he says, was continu'd in the Wound for above a Year, 'till the Matter no longer issuing forth, it was left out, and the Wound permitted to heal up.

In the same Author, we read of one *Alphonsus*, wounded by a Scimiter, between the *Sagittalis* and *Sutura Mendosa Temporis*, on the left Side of his Head, which carried away not only a large Portion of the *Cranium* and *Meninges*, but of the Brain itself, the Substance whereof lay open for a great Space to the Eye, which had been handled by Men's Fingers, whence presently ensued very desperate Symptoms, as *Fever*, *Rigour*, *Delirium*, *half Palsy* on the opposite Side. When our Author was call'd in, he perceived the Surface of the wounded Brain growing putrid, and a stinking *Sanies* thence arising; he order'd the Wound to be dress'd up with equal Parts of the *Ol. Mel Rosar.* with a double one of *Aq. Vitæ*, shook up well together. *Deinde* (inquit) *cum Unguento de Matrisylva, super Penicillo, in eodem madefacta, & Dei omnipotentis gratia* (continues the good Man) *evasis aeger*. Having recited several other like desperate and wonderful Escapes of this nature, he goes on thus; *Postea quamplurimos alios mirabiles casus, cum incisione & lacera-*

Of Wounds of the BRAIN.

laceratione substantiæ cerebri, sæpe à me sanata fuisse, dicant antiqui & moderni Medici, quicquid sibi placuerint.

Fallopianus delivers, that he saw one who was wounded by a *Partizan*, in the Depth of Winter, & *sectum est* (to use his own Words) *dimidium fere caput*, whence a larger Quantity of the Brain came forth, than could be contain'd in a Hen's Egg; yet was cured. Many others he takes Notice of, under the like Accidents, some losing their Senses, and holding out fourscore Days; others a hundred and twenty; others, again, for some Years. One at the said Term of eighty Days, after seemingly well cured, the first of his going abroad, fell down dead.

Franciscus Aræus has collected Nine of these extraordinary Histories in his own Practice, out of a much greater Number which had fallen under his Inspection.

Gemma also records many such surprizing Cures, *Quæ (ut semet exprimit) juxta Hippoc. sacrosancta oracula in limine esse mortem.*

Andr. a Cruce summons great Numbers of reverend Fathers, Physicians, and Surgeons, to testify his Performance of various Cures of like Kind with the foregoing; particularly, one of a young Man wounded through the *Meninges* into the Brain, by the Point of a *Sickle*, when, upon opening the *Cranium* by the *Trepan*, a notable Part of the Brain continued to run out the first fourteen Days. The Wound was dress'd with the *Ol. Terreb.* and *Aq. Vitæ* mixed: Afterwards, keeping in a Pipe for the Discharge of Matter, some of the following was instill'd;

Rx Vini Mont. ℥xx. Suc. Beton. ʒiv. Calament. ʒij. Myr. Olib. Aloes, Sang. Drac. Centaur. min. Gran. Hyperic. a ʒj. pistantur quæ pistari possunt,

ac in subtiliff. pulv. redigantur, ac omnia simul componantur, ac per triduum in vafe bene obturato marcefcant; poftmodum lento, ac claro igne, donec tertia pars abfumatur, bulliant. Deinde adde Mel. Roſar. ℥iv. & parum adhuc bulliant. ab igne vafe detracto adde Aq. Vit. ℥vi. liqueſcant ac percolentur. tum adde Ol. de Terebintb. ℥iv. & in vitreo vafe, Cera optime obturato, diligenter conſervetur.

Thus, in four Months, the Sick was reſtor'd, Deo favente, vel natu Dei, as our Author words it, not without a Defect of the Speech, and a Reſolution of the oppoſite Arm, as frequently enfues upon theſe Hurts.

What our Author means by his *Pulvis Cephalicus* of *Avicen*, which was ſtrew'd over the Wound, and his *Ceratum Humanum*, externally, I am at a loſs for; but his *Ol. Terebintb.* I am ſatisfy'd is the ſame with what our Surgeons call their *Bals. Terebintb.* as by this following Preſcription thereof appears plain;

℞ Terebintb. claræ & odoratæ ℥iij. Arenæ ſirviſſe depuratæ, lotæ & ſiccæ, vel Vitri contuſi, ℥ſſ. omnia in curva Boccia (i. e. Retorta) cum ſuo recipiente ponantur, & Boccia in vafe terreo, inter quod & Bocciam cineris in eo adſit copia, quod nullo modo tangi poſſit, & lento igne, ne Terebintbina tumeat & infletur, fiat elembicatio, & quod primum deſtillat aqueum eſt ac nullius momenti; quod ſecundo, coloris auro obſcurioris & denſioris ſubſtantiæ, optimum eſt ac uſui ſervandum; quod tertio, etiam & cæno ſimile, probatur in Ulceribus Tibiarum antiquis & cacoethe.

Another way, like ours, of preparing the ſame Oil he ſets down thus;

℞ Terebintb. claræ ℥ij. Laterum Rec. ℥ſſ. Maſtick. Styrac. ā ℥j. Lateres igniti Oleo extinguantur, & fracti

Et fracti misceantur reliquis, Et per lambicum, tres ut dictum est excipiantur liquores, quorum secundus optimus.

Horatius Augenius writes, that he once perceived a Wound through the whole Substance of the Brain, whose *Ventricles* had been dissected thereby, and a Quantity of the same discharging, after drawing forth the Weapon; yet the Wound was after restored to health.

Galen observes the like at *Smyrna*, his Master *Pelops* then living.

It were too tedious to recite more of these, delivered by *Borellus*, *Hildanus*, *Cabrolus*, *Horstius*, *Webfer*, and others: The Causes of which, according to one of them, are not so much imputable to the Wounds, which of themselves, says he, are mortal, according to *Hipp.* but to the peculiar Nature and, as we took notice at the beginning of this Discourse, Temper of the Body, with its uncommon Firmness and Strength of Parts; to which give me leave to add, surely, the Interposition of Divine Providence; or, as *Volterrus Coiter*, in a stupendous Recovery of one of his own Patients, *per Dei omnipotentis insignem Et insperatam benignitatem valetudinem pristinam recuperavere.*

Zacutus Lusitanus has an admirable History, something related to our present Subject, when speaking of a Whore, that had been long at the Ale-house, and, being got drunk, she abused every one that came in her way; at length meeting with a Man in the same Pickle, they fell out, and she received a deep Wound on the Top of her Head, with a Knife, that was very long and sharp: To that for many Days she lay as one dead, without Sense or Motion: At length, after much

Pains,

Pains, she was cured, and got abroad; when, eight Years after, dying of a malignant Fever, and in the Hospital dissected, upon opening the *Cranium*, there was found, betwixt that and the *Dura Mater*, the one half of the Knife, wherewith before she was wounded, eaten over with a Rust: Yet whilst alive, after the Hurt inflicted, went about her Business of the House, without Complaint of any Injury to her animal Faculties.

Hildanus observes a Pistol-Shot lying between the *Cranium* and the said Membrane, for six Months, without Prejudice to the Patient.

WOUNDS of the Lungs.

WE come now to the middle *Venter*, or, *Thorax*, in which first of the *Wounds* of the *Lungs*; which, although not included in this *Aphorism* of *Hippocrates*, have been commonly reckon'd mortal, but are no otherwise absolutely so, than as the Blood-Vessels happen to be divided, and the *Hæmorrhage* incapable of being restrain'd; of which we have numberless Instances in Stabs, and other Wounds through their whole Substance, missing the large Trunks of the Vessels.

One of them I have given you before, when discoursing of the Wounds of this middle Region of the Breast: Nay, where there has been great Extravasation, provided the Breach in the Vessel can be agglutinated, what is effused may be let out of the Cavity, and the Sick preserved.

Vesalius observes, that in such Cases, viz. of Blood falling down from above, particularly the Lobes of the Lungs, discoverable by the *Orthopnea* usually attending, or where the Patient cannot

not breathe, unless in an erect Posture; the Wound being incommodious for the Discharge, he made Incision *secundum decimæ Thoracis Costæ in ea Dorsi sede incessum, quâ illa maximè in posteriora obliquatur, & prominet*: When, having got the Knife to the upper part of the Rib, guided by the top of his Fore-Finger, he pierced the *Pleura*; and, perceiving an Adhesion of the Lungs thereto, carefully, by the Help thereof, separated the same, making way for the Discharge of *Grume*, or *Serum*; by which means he gives us several Instances of having rescued thereby many Persons from the Peril of Death, who had no other way to be freed therefrom.

Rolandus Parmensis, Lib. iii. Chap. 25. of his *Praxis*, as also *Theodoricus*, Lib. II. Cap. 17. affirm, with that eminent *Venetian*, *Franciscus Strata*, that the wounded Lungs, even where great Portions thereof have been cut away, do notwithstanding admit of Cure.

Petrus Forestus writes, concerning some Patients taken into the Hospital, after having been wounded in the Breast, who continued there for a Year and half; in which time the whole Substance of this Bowel seem'd to be excreted, or hawk'd up, together with Matter expectorated at the same time, the Heart lying bare after Dissection, without any appearance at all of Lungs.

The fore-mention'd *Rolandus*, in Book III. Chap. 25. gives a memorable Account of a *Bononian*, wounded in this Region, whom he visited the fifth Day after, and perceived Part of one of the Lobes of the Lungs thrust forth the Wound, between the Ribs, which, by reason of the great Inflammation attending, he was unable to return into its place. Several other Surgeons, before consulted, had pronounced him a dead Man, the

Part

Part thus exposed and corrupted by the Air, he circumcised, and, having so done, by proper *agglutinative* and *vulnery Topics*, healed up the Wound: Whereas, had he been called in early, he prudently remarks, he should have dilated the outer Wound, and raising up the superior *Costa*, or depressing the inferior, as best favoured the Enterprize, facilitated their Intromission before they had been corrupted.

Bartoline, Cent. 5. *Hist. Anat.* 96. from *Tulpius*, observes the like Accident, where three Ounce Weight of the Lobe of the Lungs was cut off, and the Wounded after restored to Health; which occasioned *Fallopious* to make this just Remark, *Vidi*, inquit, *pulmones sic inflatos, sanatos, vidi etiam mortuos, quare vulnera pulmonis ex equo se habent*, cap. xii.

Felix Platerus, among his own Observations, mentions a deep Wound in the lower Part of this Region, by a Stab with the Knife, whence great Quantity of a stinking *Pus*, corrupting the contained Parts, issued forth for long time, together with several Portions of the Lungs; wherein were manifest the cartilaginous Branches of the Wind-Pipe, which, having brought the miserable Patient into the last Stage of a *Phtisis*, at least ceasing to work out, the Wound closed up, and the Sick regained his Health.

Laurentius Scholtzius, in his Letter to *Jessenius*, acquaints him with a Case, seeming yet more desperate, where, by a Wound through the right Lobe of the Lungs, the same came away piecemeal, as we say, together with the Injections thrown in for cleansing thereof; leaving that side of the Chest a perfect Vacuity, as was to be inferred from the large Portions of the *Bronchie*, together with the Vessels now grown putrid, extracted

tracted from the Wound, and of themselves discharging with the Matter and Liquor thrown in as aforesaid: Yet, by a proper *physical* and *chirurgical Regimen*, he was restored, as our Author says, who saw him long time after; however, with a pale Aspect, yet breathing easily.

Valeriola names a Person shot through the Breast with a Pistol, who had the good hap to escape Death, being perfectly recovered of the said Wound; which occasioned *Fallopious* to deliver himself upon this Subject, in the manner following, *Thorax nunquam mortem infert, dummodo interiora non tangerentur, ut plurimum tamen Fistule eveniunt; multos sanavi, sed hoc rarum est, & adjutore Deo,*

Hollerius tells us, he made a Partition between the fourth and fifth *Vertebra*, to let out Matter fallen down upon the *Diaphragm*, that had been owing to a Stab in the Back, slanting down from the *Scapula* into the Chest.

On the contrary *Massa*, lays down a *Regimen* for Wounds, penetrating the Cavities of the Body, which he undertakes to cure, as well as the *Fistula's* left behind, without the Use of Knife or Caustic.

Of the same Opinion we find *Arceus*, who, on the other, lays the whole Stress on his *Wound Drinks*, and *vulnerable Balsams*, to be seen in the one *Tom. 2. Epist. 11.* of the other, *Lib. 2. Chap. 2.*

There are two, upon some accounts, very singular Cases, relating to the Wounds within the Cavity of the *Thorax*, with which I shall finish this Subject of the wounded Lungs: The one from *Platerus*, concerning a Citizen of *Mulbrun*, who, falling from a high Tree, pitch'd with his *Loins* upon a Pale or Stake, which entering the

Muscle

Muscles thereof, was forced upwards into the Cavity of the Breast, and being drawn forth, this miserable (at least to outward appearance) wounded Man, seemed to suffer no other Disturbance, than that of a great Hole, remaining in his Back, and would blow out the Light at any time held near thereto, especially contracting his Chest, or drawing in his Breast at that time. What was farther memorable, after long time past, a Piece of Flannel was drawn out of the said Hole, that many imputed to Art-Magic, or Witchcraft; till recollecting the Shirt he had on at the time of the Hurt; which being called for, they found a Piece of the same torn off, easily suited to the Rent, and which had been carry'd into his Body, along with the Pale: The Patient lived long time after, without other Complaint, than that the Perforation, as abovesaid, could not be stopped up.

The other from *Benivenius*, mentioning a young *Florentine*, shot into the Breast with an Arrow, which, endeavouring to extract, he pull'd forth the Reed, but the Point or Shaft was left behind; upon which, growing desperate, he attempted to destroy himself, but was prevented by the Counsel of a holy Man: Yet, refusing to have the Wound enlarged, or the Bone divided, for its easier Extraction, he betook himself wholly to his Prayers; turning *enthusiastical*, and seeming to be endowed with a *prophetic* Spirit, foretelling many Things which were really accomplished at the time appointed; such as his own Return to *Rome*, with the Day of his Death; the Exile of *Peter de Medicis*; the great Calamities and Streights to which the City of *Florence* should be reduced, with the Subversion of all *Italy*; and many others, with our Author, which, for Brevity, I shall

Of Wounds of the LUNGS.

onit, such as the calling those by their proper Names, who were utterly unknown to him, foretelling certain Persons, a great way off, coming to visit him, and, among the rest, the Day and Hour when the Shaft of the Arrow would come forth of itself; which punctually came to pass, when immediately his Foresight left him. At length, after great Difficulties, he arriv'd at *Rome*, and died at the time he had predicted.

Wounds of the HEART.

THE Heart is allowed the principal Part of an animal Body, being that which gives the first Token of Life, by its Pulsation, and the last Signal thereof, or Death approaching, by the Cessation of such Motion; which being incessant, as well as that of the Lungs, seems a very good Reason why the Wounds inflicted on either, are more difficultly united: Besides, the main Trunks of the Blood-Vessels having here their Rise, inevitable Death must be the Consequence of their Division; otherwise we have had Instances both of *Wounds*, *Abscesses*, and *Ulcers* in the fibrous or carious Part of this *Viscus*, discoverable after Death, yet the Patient long time surviving. Some such you will meet with in *Columbus*, *Benivenius*, *Hollerius*, *Fernelius*, *Joubertus*, *Hildanus*, *Trincavelius*, &c.

Galen, lib. 1. cap. 5. *De Placit. Hipp.* gives a Relation of one who, from a Blow upon the Breast bone, had an *Abscess* ensued thereon; whence the same growing carious for a great space, a large Piece was cut away, when the Tip of the Heart appeared naked, void of its Cover, the *Pericardium* which was corrupted by the Matter falling down

Had I, however, not for a while, from

from above; notwithstanding which, this great Breach was repair'd, and the sick recovered.

Benivenius, from another formed about the seventh *Vertebra* of the Back, and continuing long open, had so corrupted the Parts all round, that the Motion of the Heart was plainly perceived by the Eye; till with great Care and Diligence, the Parts above were healed, and the Patient restored to former Health.

The same Person speaks of a Quarrel arising between two Brothers at Supper, where the one with his Knife stabbed the other to the Heart; whence great Effusion of Blood, the Face growing pale, cold Sweats, and *Syncope* also attending, with all the Signs of approaching Death; notwithstanding all which, by proper *cordial* Remedies timely administered, and *vulnerary* Applications, about Midnight he seemed to revive, and by due Care of his Wound, was at length retrieved from the most imminent Danger: Whence, saith our Artift, I was fully satisfy'd, that not the Substance of the Heart, but its Tunicle, the *Pericardium*, was touch'd, or wounded.

Cardan (that second *Pliny* for Remarkables) in his *Com. in Aphor. 18. lib. 6. Hipp.* assures, that he has seen Part of the said Membrane taken off, the Patient surviving long time after; and, that Wounds in the Substance thereof are not absolutely mortal, where the Vessels have escaped, and the Instrument has not entered the Ventricle.

Baubine takes notice, that, upon a Dissection, he perceived not only the Lungs entirely wasted, but the Cavity full of *grumous* and *putrid Gore*, with the *Pericardium* implete with *Pus*, which had consumed the Superficies of the Heart itself; the Patient living thus for some time, attended

Of Wounds of the HEART.

with a slow Fever, Difficulty of breathing, and, a little before he died, with fainting Fits.

Brassavola reports, that if the Tip of the Heart be cut off, the Creature may live sometime: That he once saw a Sow thus wounded, who eat heartily afterwards; and probably had survived, at least much longer, had she not been farther wounded, meaning, I suppose, by the Butcher.

Jacotius and *Tho. a Veiga* recite the Cases of a Couple of Stags, the one having the Point of an Arrow found fixed in the Heart; the other with the whole Dart, the said Point fast in the Substance of the same Part, both having received their Hurts in Hunting long time past.

Julius Alexandrinus another, of a Hare, whose Heart had been formerly pierced through with a Bullet shot out of a Gun.

But the Analogy will scarce hold good with us, nor the comparative Anatomy, however otherwise instructive, bear a Parallel in these Cases; for tho' the like Parts are destin'd to the same Offices in both, yet in their Make and Texture they are widely different, as well in regard to the fluid as the solid Parts: The munificent Creator having amply supplied the Want of Reason, by forming the Bodies of brute Animals of such Materials as should not require the help of Art; and by their simple, or, shall I say, more reasonable Way of Life, exempted them also from that Train of Miseries, the Offspring of Idleness and Luxury, which we, to our great Scandal, too often bring upon ourselves, or have the Seeds thereof entailed upon us by our Parents. Which of us can cure a prick'd Tendon, or a great Gap cut in the Flesh, with a little Saliva, or a Lick of his Tongue, as do these Creatures very frequently? Which of us can cut Capers, as we say, which I have seen a Frog do, some Hours after Excitation of the whole Viscera? Which of us can under-

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go the Sections of some, and entire Exsections of others of the said Parts, and after stitching up the outer Teguments, without any other Balsam, unless the same Saliva, leave them to Nature's Management.

Wounds of the DIAPHRAGM.

QUITTING now this Argument, we come next to the lower *Venter*, at least the *Partition-Wall*, called therefore by *Hippocrates*, *Septum Transversum*, whose Wounds inconditionately, whether on the *fleshy* or *nervous* Parts thereof, have been, in this *Aphorism*, pronounced mortal; whereas we have numberless Instances, where, on the *musculous* Part, Solutions of the *Continuum* have been (especially in good Habits of Body) agglutinated and healed; and at sometimes even those of the *nervous* also: An Example of which I have given you in my Discourse of the Wounds of the Belly.

Ambrose Parey has two remarkable Histories of these Wounds; the one dying in three Days, where the *nervous* Part was thrust through, and after Dissection missing the Stomach, he says, he found it drawn, by the Perforation, quite up into the Cavity of the *Thorax*, where it was greatly distended with Wind, altho' the Wound was no more than the Thickness of the Thumb. The other was made by Gun-shot, the Ball entering at the Bottom of the *Sternum*, by the *Xyphoide* Cartilage, and piercing the fleshy Part of the said *Diaphragm* passed forth by the *bastard* Ribs. The wounded Man, who was a Captain, lived eight Months afterwards, complaining all the time of great Weakness of the Stomach, and a Pain of the Bowels,

like a *Cholick*. After opening the Body, as, in the former, the whole *Ventricle*, so here great Part of the *Colon*, was perceived forced up into the Chest, through a Hole no larger than the Top of a Man's little Finger.

Wounds of the LIVER.

IMMEDIATELY below the *Diaphragm*, on the right Side, lies situate the *Liver*, whose Wounds *also*, with the foregoing, are pronounced fatal by the same *Hippocrates*; and yet we meet with several Exceptions, as well at home as abroad, where the large Trunk of the Blood-Vessels has missed the Instrument; as also from *Abscesses* formed therein, whence some have had the good Hap to be retrieved.

Gemma. lib. 1. cap. 6. sets down a young Spaniard, who, from a large Wound on the right Flank, had a considerable Portion of this *Viscus* came forth; yet by *vulnerary Decoctions*, and proper manual Application, he was restored to his former Health.

Platerus has an odd History of a Hound, which in hunting, being gored by a Boar, great Part of the Liver appeared out of the Wound, which (as is customary with dumb Creatures on their Hurts) the Cur at length licked off, and devoured; the Wound after healing itself, without other Chirurgery. *Exemplum* (inquit) *analogice tantum bene referendum.*

Esaias Meibomius, among his own Observations, has inserted a Case, in which one of the Physicians of the Court was concerned with him, of a Person stabbed quite through this Bowel, where, tho' a large *Hæmorrhage* ensued, he prudently

dently supposeth the Trunk of the *Porta* was untouched.

Quercetan, in his *Traet De Vuln. Sclopet*, has published one of a Person shot through this Region, and, being abandon'd by his Physicians as desperate, was after cured by some simple Remedies, administer'd by his Friends: A Caution, saith he, to Practitioners, that they forsake not any of their Patients, how seemingly soever desperate, lest, after falling under the Cure of some *Empiric*, or old Woman, they happen to recover, to the Dishonour of the *Artist*, as well as of the Art; for we find that Nature of herself, in some good Habits of Body, and rustick Temperaments, works Wonders now and then. Besides, as the great *Celsus* expresses himself, *In extremis, satius est remedium aliquod adhibere, quam nullum omnino medicis rationem tentare, vel empiricis (ego addo) relinquere.*

Of the STOMACH Wounded.

THAT the Wounds of this Part have also been recovered, contrary to this Prediction of *Hippocrates*, is undeniable. The most surprizing of which to be met with in physical History I have here collected, beginning with that noted one of the *Prussian Swallow-Knife*; the rather for that the same was not an Effort of Nature, made by Chance, at Random, or by Accident, but of Design; or in the way of an Operation, by *Daniel Schwaben*, or, as called by others, *Schwabius*; for which the then King of Poland, *Uladislaus* the IVth, granted unto him the said *Daniel* (who by the way is herein called by the several Names of *Cbirurgion*, *Physician*, *Cutter of Ruptures*, and *Oculist*) his *Royal Charter*, with large *Immunities*,
Exemptions,

Exemptions, and Privileges to himself and Family: This, I say, which at that Time was call'd the *miraculous Case* by the Physicians of *Leiden*, to whom the same was wrote in *Latin* by the celebrated Dr. *Becker*, and after translated into our Language by Mr. *Lakin*, being a Book at this Time uncommon, and perhaps unknown to many of you, I shall here set down, as briefly as I can, to render the same any ways instructive, by an Abstract thereof, yet keeping to the Style of the Translator.

In the Year 1635, the 29th of May, *Stylo Novo*, a rustic young Man, by Name *Andrew Grunbeid*, in the Morning feeling in his *Ventricle*, by reason of some ill Diet heretofore weaken'd, a kind of Disposition to vomit, and, as he was wont, endeavouring to procure it himself with the Haft of his Knife, provoked the *Gorge*; and Vomit not presently coming, did thrust in his Knife a little deeper; which, partly by the Violence, and partly by its own Weight so let down, and comprehended within the Jaws, escaped the Extremities of his Fingers, and, by little and little, tended to the *Ventricle*, and stopped somewhat about the *Orifice*, not without Pain and Dolour. But altho' the *Swallow-Knife*, being somewhat terrify'd, and, by bowing his Body downwards, assay'd the Egress of the Knife, yet it was all in vain; therefore, upon new Advice, *Laudisbergenfis* endeavoured rather the more to humect the Mouth of the Stomach with Beer or Ale, and so to promote the Knife to the Cavity of the *Ventricle*; and which succeeded, and the Knife went down to the Bottom thereof: And so the Anguish and Pain aforesaid ceasing, the Countryman, tho' not a little troubled with his unwelcome Guest,

yet

yet went he about his accustomed Labours, without Trouble: The Knife, as after Excision it was seen, was just in Length ten Fingers Breadth.

This the most miserable Condition of the afflicted *Rustic* moved the Consul, Master *Hartlein*, to implore my Counsel, to whom I gave this Answer, That it was a Matter of great Moment, and that scarce two such Chances were to be found in the Observations of Physicians: And having declared the Story of the *Pragen-sian Swallow-Knife*, I advised that the Man should be sent for, that by the whole College of Physicians Deliberation might be had what were best to be done. Afterwards, the Case is laid open to the famous Mr. *Crager*, a prime Colleague; and the Patient readily submitting himself, the 25th of *June*, seven and twenty Days after it had been swallowed, was appointed for a general Meeting; when, examining all Things, it was concluded his Body should be prepared for the Section, by giving him some balsamic Medicines, especially the *Spanish Balsam*, so call'd and recommended by the senior Physician, Dr. *Lotbus*, together with the magnetic Plaster, after the Example of the *Pragen-sian Cure*; which *Hieron. Fabrit. ab Aq. Pendente*, describes thus;

R^x Ol. Vetust. ℥iv. Tereb. puræ, ℥viij. Frument. integ. ℥i℔. Hyperic. ℥ij. Rad. Card. Ben. Valerian. a ℥j. Thuris pulv. ℥ij. contunde & incide Rad. cum herb. postea infunde vel submerge in vino pro ij. Diebus, addendo Oleum, & Frumentum coque leniter ad vini consumpt. colentur per expres. imponendo Tereb. & Thus coquendo iterum paulisper in phiala reservando.

This

‘ This, saith our Author, I received from a
 ‘ very credible *Spanish* Priest, who told me, that
 ‘ in *Spain* it was not lawful to compound it; be-
 ‘ cause Men, trusting to its wonderful Efficacy,
 ‘ made nothing to enter the Lifts and fight, for
 ‘ it healeth the Wound in twenty four Hours.
 ‘ The Manner of using being thus; First the
 ‘ Wound is to be washed with Wine, and pre-
 ‘ sently to be anointed with the warm Balsam, af-
 ‘ ter which the Lips thereof are to be brought
 ‘ close by *Ligature*, *Suture*, or *dry Stitch*; then
 ‘ the Parts are to be anointed round about with
 ‘ Lint dipped in the same, over the Wound thus
 ‘ closed up; then more Lint express’d with
 ‘ Vinegar; lastly, dry Lint, and so bandage
 ‘ it up.

‘ But believing the said Balsam might be far-
 ‘ ther improved for the present Exigence, it was
 ‘ agreed the same to be thus altered;

℞ *Ol. Olivo. rec. ℥iij. Tereb. ℥i ℥. Summit. Vale-*
rian. Hyper. Card. Ben. ā p. iij. Thur. ℥j. Myr.
Elect. Aloes. opt. ā ℥iij. Cocc. insect. ℥j. Resin.
Pin. rec. ℥iij. Vini Malvat. ℥iv. Digerentur per
iv. horas, deinde coque ad vini consumpt. &
coletur per expres.

‘ The Form of the *Magnetic Plaster* here
 ‘ follows:

℞ *Lapid. Magnet. opt. ℥j. Rad. Aristol. utriusq.*
Polypod. Visq. Querc. ā ℥j. Sterc. Anser. ℥i ℥.
Gam. Ammon. Galb. in Vino alb. solut. ā ℥ij.
Propol. ℥ij. Mel. ℥j. m. pro Emplastro.

The

' The Body being prepared, and all Things
' necessary provided, at length, on the 9th of
' July, one and forty Days after the Accident,
' there met the Dean of the Faculty, with the
' Honourable the Members, together with the
' Students, Masters of Arts, in Company with
' that most experienced *Chirurgion*, *Daniel Scwa-*
' *bius*, my venerable Friend, now in Heaven;
' who calling upon the Divine Assistance and Be-
' nediction, the Rustic, who with undaunted
' Courage waited the Section, was bound down
' on a Table, and, the Place being marked out,
' the Incision was made towards the left Side of
' the *Hypochondrium*, some two Fingers breadth
' under the short Ribs, according to the Directi-
' on; and first the Skin and fleshy Pannicle, (there
' being no Fat seen) with the subjected Muscles,
' as also the *Peritonæum*, were carefully divided,
' when, altho the Ventricle did somewhat sink
' down, [query, Whether the filling it with Li-
' quor, as we do now the Bladder, for the high
' Operation, might not have facilitated this] and
' avoiding our Fingers, did not so presently ad-
' mit of Apprehension, a little staying the Ope-
' ration; yet at length attracted with a Needle
' crook'd, it shew'd that the Knife was there,
' which being laid hold on, through the Coats of
' the *Ventricle*, and the Point brought upwards,
' the said *Ventricle* above the same was a little in-
' cis'd, and the Knife successfully extracted;
' which was view'd by all the By-standers, ap-
' plauded by all, and none more than the Patient
' himself, who professed that this was the very
' Knife he formerly had swallow'd; but the
' Wound itself, after the Knife was drawn forth,
' was quickly allay'd.

' The

Of Wounds of the STOMACH.

The Knife being thus successfully brought forth, and the Patient eas'd of his Bands, the Wound cleansed of the Blood, and the *Abdomen* that had been incis'd, closed together with five *Sutures*, by their Interstices, the Balsam was instilled warm, and Dossils therewith impregnated laid on, and then a *Cataplasm* of Bole, the White of an Egg and Alum, to allay all Inflammation on the Outside: About five in the Evening, he took this sequent Decoction with a Portion of the sequent Powder;

℞ *Herb. Betonicae, Saniculae, Matris Sylvaee, Pyrol. ā m. j. Tormentil. m℞. coquantur in q. s. Aquae Simpl.*

℞ *Colaturae ℥iij. Syr. de Hyssop. ℥℞. f. Haustus;*

℞ *Pollin. Nuc. Mosc. ℥j. Ocul. Canc. ℥j. & ℥iij. m. f. Pulvis.*

The same Evening the *Cataplasm* being removed, a *styptic* Plaister was applied: The second Day we met again, at Seven in the Morning, when we found he had rested well, but was a little feverish, and his Urine bloody, with a Sediment of *Grumes*; the Wound yet appear'd well disposed, the Patient complaining of little Dolour, the same was now washed with Wine; and two of the *Sutures* being removed, the *Balsam* was instilled, and the Plaister laid on again. We now allow'd him the Broth of a Capon, boiled with the following *Vulneraries*;

℞ *Herb. Veron. Pyrol. Alchymil. ana m. j. Hyperic. m℞. Agrim. Flor. Cord. ana p. j. bul-*
liant,

‘ *liant cum Brodio, in quo solve Conf. Scabios.*
‘ *Melis. ā ʒj.*

‘ About five the same Day, Dressings were re-
‘ newed ; and, being costive, a *Suppository* put up,
‘ but without effect. Towards Night he took an-
‘ other Draught of the *traumatic Decoction*, with
‘ some more of the Powder. The third Day, in
‘ the Morning, at the same Hour, the Wound
‘ was again inspected, two Sutures more being ta-
‘ ken away. This Night he had slept little, tho’
‘ all the Day before very soundly. His Urine
‘ was yet bloody, his Pulse remiss, yet very tole-
‘ rable. He felt a kind of Tension, with Do-
‘ lour, in the left *Hypochondrion* ; and having had
‘ an *Enema* injected of a *Decoct. Hord. cum Cassia*
‘ *ac Saccb. solut.* but felt not after any Evacuation,
‘ the sequent was prescribed, for the more com-
‘ modious Evacuation of the clotted Blood.

‘ *Rʒ Herb. Emol. ā m. j. Saturēje, Aneth. Melilot.*
‘ *Chamomel. ā mʒ. Sem. Lini, Fœnicul, Fœnugr.*
‘ *ā ʒi. coquantur in Aq. q. s. pro. ʒj. cui adde, Elect.*
‘ *Lenit. ʒj. Mel. Anth. ʒvi. Sal. Gem. ʒʒ. m. f.*
‘ *Enema.*

‘ This answered the Purpose, and brought off
‘ many blackish Excrements, whereby that trou-
‘ blefome Tension was taken off, the Belly be-
‘ ing anointed also *cum Ol. Verbas. ac Anethi.* At
‘ five again in the Afternoon, as customary, the
‘ Wound being dressed, and bound up afresh.
‘ The fourth Day of the Disease, which was the
‘ 12th of *July*, the same Applications were con-
‘ tinued. He had slept well, but his Pulse was
‘ fainter ; wherefore the Pullet-broth with the
‘ sequent Herbs were boiled.

‘ *Veron.*

‘ By *Veron. Agrimon. Pyrolæ, Saniculæ, ā m. j. Beton.*
 ‘ *Tormentil. ā m ℞. Rad. Symphit. maj. ʒ ℞ Scob.*
 ‘ *Lign. Sanē. ʒj. m. ad. Brodium.*

‘ His Back was also anointed with *Unguent. Rosa-*
 ‘ *ceum*; nor was there any other Alteration in the
 ‘ Dressings of this Day. The fifth Day, in the
 ‘ Morning, we met again, he had but an ill
 ‘ Night, yet without Feebleness of Strength, his
 ‘ Pulse laudable, his Urine of a Gold Colour,
 ‘ with a whitish Sediment, large and thick, the
 ‘ Pus from the Wound good, and the Costiveness
 ‘ helped by the last Clyster, no farther Altera-
 ‘ tion being made this Day. The sixth the
 ‘ Wound was mundified with Wine, impreg-
 ‘ nated with *Myrr.* and *Aloes*, and then dressed as
 ‘ usual. His Tongue being dry, was humected
 ‘ with a *Mel Rosar.* and so we continued, in the
 ‘ Evening of the same Day only embrocating his
 ‘ Neck, of which he now complained, with the
 ‘ *Ol. Amygd.* The seventh he had a quiet Night,
 ‘ his Pulse strong, seemed now to be safe, the
 ‘ Wound was dressed up as before. The eighth
 ‘ there was no Alteration made, unless that he
 ‘ drank a small Portion of *Rheubarb* with *Syr. Dia-*
 ‘ *sen.* which gave only one Stool. All the other
 ‘ Days, to the fourteenth of the Disease, the
 ‘ same Applications were observed, unless that the
 ‘ Balsam was not so often used, lest the Wound
 ‘ should consolidate sooner than was fitting; and
 ‘ from the myrrhed Wine also we did ab-
 ‘ stain.

‘ The things that were done after these Days
 ‘ were ended, were all but slight, not worth the
 ‘ Rehearsal: Howbeit, the Ordinance of his
 ‘ Diet was held to be most exact; for tho’ Na-

ture

ture be accustomed to grosser Meats, especially in rustic Bodies, yet, by reason of the hurt *Ventricle*, Alteration of the Diet, for a time, was needful to be appointed.

And thus, saith our Author, by the Grace and Clemency of the Omnipotent *Jehovah*, and Supreme Director, and with the singular Industry and Dexterity of the Physicians and Surgeons, our rustic *Swallow-Knife*, was restored to good Health, complaining of no Dolour of his Ventricle; but being returned to his accustomed Diet, and ordinary Calling, with us gives thanks to the immortal God: To whom therefore be the Glory, Praise, and Honour, for ever and ever. *Amen.*

A Continuation of the WOUNDS of the VENTRICLE, extracted from the same Author.

In the Year 1632, in the Month of *January*, being in the Gulph of *Venice*, *Richard Partridge* was wounded by *George Farmer* under the left *Hypochondrium*, being both *Quarter-Masters* of the Ship *Hector*, whereof *Mr. Wild* was Commander, what he received into his Stomach, issuing out by the Wound, through the great Mercy of God, was, notwithstanding, made whole in twenty four Days; every Survey and Event through the time of the Illness being set down in my Memory, my Papers, with myself, and the Ship, being after lost.

Having extracted (being forced to enlarge the Orifice) some Part of the Knife broken, and buried in the Wound under the Muscles of

' the *Abdomen*, I contented myself with common
 ' Applications for that Night, and committed
 ' him to his Cabin. Next Day, having all things
 ' in readines I thought needful, I came to him,
 ' and found him as yet not much distemper'd.
 ' So soon as I had removed his Dressings, some
 ' Quantity of the Beer he had drunk just before,
 ' issued out of the Wound, to the Surprize of the
 ' By-standers; yet was it kept from the Patient,
 ' that he might not be dismay'd thereat; with
 ' *Stupbs* wrung out of hot Wine, I covered his
 ' Wound till this Balsam was got ready:

' *Rz Ol. Terebinth. gut. xij. Hyperic. ʒ ss. Syrup.*
 ' *Mentb. ʒij.*

' Which, being warmed, was instilled into the
 ' Capacity of the Wound, with a Tent about
 ' half an Ineh, and Pledgets suitable thereto, dress-
 ' ing up with the *Empl. Melilot.* and rolling him
 ' up, ordering him some Mutton-Broth between
 ' whiles, and so left him for that Night. The se-
 ' cond Day I perceived the Lips parted, and
 ' gaping open, I renewed the *Forus*, and then ap-
 ' plied a dry *Suture*, to bring the said Lips close
 ' together; I perceived a Sort of Milk-like Sub-
 ' stance, or chylous Juice issuing out: At this
 ' Dressing he complained of a Pain extending
 ' backwards to the *Vertebrae*, proceeding by Sym-
 ' pathy, or Consent of Parts; I dressed up as
 ' before, anointing all round, *cum Ol. Ros.* in order
 ' to keep off the Conflux of Humours. Next
 ' Night he grew feverish and restless. The Third
 ' Day I found the Wound tumefied, and begin-
 ' ning to inflame, with more of the same Liquor
 ' discharging along with the Gleet; therefore
 ' adding some of the artificial Balsam to the other
 ' with the Yolk of an Egg, mixed so as to make

it of the Thickness of a Mucilage, by a gentle Heat, I injected thereof quite through to the bottom, dipping both the Tents and Pledgets in the former Mixture, from which I derogated not through the whole Cure. And thus again I committed him to his Rest; forbearing *Pble-*
botomy, for that great Quantity of Blood was spilt by the Wound. But finding him costive, the Day following a Clyster was thrown up, as follows:

R \bar{x} Jusculi Gallinæ ℥x. Sacchar. rub. ℥ij. Ol. Com. ℥ij. Sal. com. Coccl. ℞. m. f. Enema.

Which answer'd the End, abating his Heat, and disposing him for Rest the Night following: The fourth Day I found him in as good Order as I could expect: yet the Chyle passed by the Wound, the Lips whereof seemed better digested, the Matter growing thick; nevertheless his Urine was of a deep Colour, his Pulse feeble and quick, with an increased Heat: I dressed now, as before, without any Variation. The fifth Day I found the Bolsters still bedewed with the same milky Juice, and in larger Quantity than formerly: the Lips of the wounded Stomach, before turgid, swelled and inflamed, being now, by the Digestion of the Wound relaxed, and affording an easier Egress than before thereunto; the Fever was still increased, and the Urine higher coloured; a Looseness also accompanied, which gave me great Uneasiness. Howbeit, the next Day, which was the sixth, all things turned to our advantage; the Wound was still better digested, and much less of the Chyle came out, the Heat was moderated, as were also the Stools.

Of Wounds of the STOMACH.

‘ I now changed the *Syr. de Menib.* for the *Mel. Ros.* adding a small Quantity of the *Pulv. Myrr. ac Aloes* to the Balsam before directed. The seventh, I conceived yet greater hopes of his Recovery, the Symptoms growing all milder, and so continuing to the twelfth; when, the Chyle ceasing to flow forth, I gave a greater Liberty in his Diet, allowing stronger Broths, with the vulnerary Plants; and, in few Days after, some light Flesh; adding to the Balm the incarnative Powders, which compleated the same by the sixteenth; and in few Days more healed up the Breach entirely, to the Glory of God, and the Comfort of us all. And by the twenty fourth he applied himself to his former Post in the Service of the Ship.’

Diomedes Cornarius, chief Physician to the most sovereign Prince *Maximilian*, Arch-duke of *Austria*, and Brother to the Emperor *Rudolph II.* in his rare Histories published at *Leipsick*, sets down the following:

In the Year 1546, a Countryman of *Bobemia*, was, by a broad-headed Hunting-staff, wounded in the *Ventricle*, about the upper Orifice. The Wound was large, and not possible, by any Industry or Art, to be consolidated, so that the Lips by little and little contracted a *Callus*, and the gaping Wound he stopped with an Instrument thereunto fitted: So that when he would he could thereat, with Linnen-Clouts, make clean his Stomach, and take forth the Meat and Drink he had ingorged. This his Imperial Majesty, who looked upon the Wound, could testify, as *Matthias Cornaro* his Physician often heard him say.

Julius Alexandrinus, chief Physician of the said Emperor, in his *Annot.* to Chap. IV. of *Galen's*

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Method of Physick, describes the same History after the following Manner:

‘ A *Bohemian*, of a Town called *Puggebrot*, who was wounded in the *Ventricle*, or Stomach, began thereat, as often as the Wound was dressed, to reject his Meat. The Physicians hereat stood astonished, judging the Case desperate, and therefore handled they the wretched Man neglectfully, and treated him not according to Art, being in the Case utterly unskilful; so that at last the Lips of the Wound became *callous*, there issuing always thereat Part of the Meat that he had eaten, sometimes very impure, at others a kind of milky Juice, or Chyle. Thus the Man, left in this miserable State, only covering the Wound with some Clouts, and bandaging it about, lived for some Years. Whereas when the Wound was green, had all things been artfully administer’d, I doubt not but the same might have been agglutinated, because he lived after a long while, forsaken and neglected of the Physician. Nor was the Wound in any thin Part of the *Ventricle*, but in the thicker and more fleshy, as is the Constitution of its upper Orifice.

James Oetbius, in his physical Observations, records such another. In the Province, saith he, of *Fulda*, I was familiarly acquainted with two industrious Surgeons, *David* and *John Schenk*, who constantly affirmed to me, that they had formerly cured a robust Soldier, who, by a Rustic of *Mar-pach* in the same Province, was with a hunting Staff struck through the right *Hypochondrium*, and, after they had diligently searched the Wound, they perceived it had penetrated into the *Ventricle*, and the Meat and Drink he had taken a little while before, to gush forth altogether thereat,

Wherefore declaring to the sick Man and his Kindred the Greatness of the Danger, they assayed the Cure, and penetrating that Part of the *Ventricle* that was wounded, to the Wound of the Muscles of the *Abdomen*, and there, with one Suture fastened together the gaping Ventricle, and the said Wound in the Muscles; the Patient stoutly enduring this dolorous kind of Cure. At last the Wound by little and little was consolidated, the sick Man recovering his former Health and Strength. I enquiring of the Truth hereof from the Countrymen of that Town, they did all witness unto me, that such a thing was done.

John Gessen of Gessen his *History of a Bohemian Rustick, or another Swallow-Knife.*

IN the Year 1602, and in May, there met me a Countryman of *Prague*, of mean Stature, young and lusty, with a Surgeon in his Company, who rehearsing that some few Days ago, being in a Wine-Tavern, he did in sport put a Knife into his Mouth, and it, sinking in the Gullet unawares, fell down and pierced into the *Ventricle*; desiring therefore in this Misery I would supply him with my Advice. Unbuttoning himself, we saw a Place bunching forth, which, after heedfully handling, we found the Point of the Knife, somewhat more blunted, in the bottom of the Stomach, tending to the left Side, with the Haft turned towards the Back; therefore, when, I shewed him the Greatness of the Danger, and that the Knife could not go back the same way it went in, nor also by the Intestines to be possibly voided, the Patient

Patient astonish'd, and, considering his Misery, earnestly desired, that forthwith, by *Section*, I would free him from inevitable Death: But when I shewed him too how dangerous it would be, by reason of violent Symptoms that might come thereon, by such an Operation, and advised him to commit this Matter unto Nature, he did rest contented with my Advice; for I declared unto him, that in my time, at *Paris* (in a History hereafter to be inserted) a Knife, being likewise swallow'd down by a Juggler, the ninth Month after egressed by the Groin. Thus I parted with this unhappy Man, seriously admonishing him not to stir, nor to stuff himself, lest the Knife might change its Place; and the Surgeon I charged to apply Suppuratives to the Parts affected. A little while after, the Knife endeavoured to come forth; which Endeavour the Surgeon furthering with the *magnetical Emplaster*, it did at last break forth. The Knife his Imperial Majesty hath commanded to be laid up among his Jewels, and to testify the Miracle, to be preserved. *Written at Prague, on St. John Baptist's Day, 1607.*

A Case of like Nature with the foregoing, almost in all its Circumstances, I find transmitted to the *R. S.* in the following Words.

January 3. 1621. one And. Rudloff, a Country Lad, near Hall in Saxony, about sixteen Years of Age, playing Tricks, with a Knife in his Mouth, it accidentally slipt down his Throat into his Stomach. The Knife was in all about six Inches and a half long, with a Hartshorn Haft. The Curiosity of the Case did oblige Mr. Wolfgang Chris. Wesenern, Physician to the Elector of Brandenburg, to take care of him. The Knife was felt to have changed its Position several times, and after a few

Of Wounds of the STOMACH.

Months ceased to be very troublesome, and in about a Year was so much diminished, as to be difficult to be felt from without. Not long after, an angry Tumour, with Inflammation, broke out three Fingers-breadth below the Pit of the Stomach; which being ripened, the Aposteme was opened, *May 24, 1692.* and being kept open, the Point of the Knife first appeared thereat, *July 18.* following. The Point they fastened with Silk, and the Wound being widen'd, the same was drawn out thereat, *August 2,* a Year and seven Months after it had been swallowed; and in a little time after the Lad was perfectly well. The Knife was exceedingly consumed in all its Dimensions.

Mr. *Clark*, in his Paper deliver'd to the same Society, tells us, That among the Rarities in the *Anatomy-Hall* at *Leyden*, there is preserv'd a Knife, ten Inches in length, which was cut out of a Peasant's Stomach, who lived eight Years after. Whether this relates to the *Prussian* or *Praguenian Swallow-Knife* seems doubtful, as not agreeing with either of their Descriptions, the latter measuring in all but six Inches and a half, the former ten Fingers Breadth; whereas this of *Leyden* is said to be ten Inches.

That preternatural Bodies should lie so long in the Stomach, especially such as are edged or pointed, without destroying the Patient, seems admirable; yet, where the Fibres are robust, we find they not only do so, but that by the Juice therein, rather, I think, than by *Attrition*, Nature is making all the Effort she can for digesting of the same. The most remarkable Instance we meet with of this kind (at least which I have) was communicated to the Society by Mr. *Amyard*, as follows:

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'Tis now, says he, (*Jan.* 20. 1708.) but five Weeks, since an Idiot from his Infancy died at *Ostend*, the Place of his Birth, in the thirty third Year of his Age; his Death having been preceded by a twelve Days remitting Fever, and a considerable Tumour and Pain about the Region of the Liver. His Brother, in whose House he had constantly dwelt, being desirous to know the Cause of it, sent to Mr. *Ricks*, an eminent Surgeon to open him; who sent his Son, likewise Master Surgeon of the same City, with his Servant, who did the Work in the Presence of the Brother of the Deceased, and a Nun, brought thither, by the Desire of discovering the Cause of her spitting and vomiting of Blood, to which this Fellow had been very liable, as well as to bloody Stools, six Weeks before he died: A large *Abscess* or *Aposteme* was found in each Lobe of the Liver, whose Bulk did far exceed the ordinary Stint: The Stomach being open'd, was found extremely contracted and very ponderous, and indeed no wonder, when, upon the apertion, was discovered a Bundle of the Things following, closely involv'd, and embraced by the Coats thereof; *viz.* nine Cart-Wheel Nails, and six lesser, a large and long Iron-Skrew, two Pair of Compasses, the one with a Circle two Inches Diameter, a middle sized Key; a large Iron-Pin, as big as my Thumb, and four Inches long, with a Ring at the end of it; another of Brass, but much less; the Handle of an Iron Spring-Knife (swallowed, as it is believed, entire, but the Sides and two Pieces making up the Spring of it, found asunder, the Pegs of the Knife tying those Pieces together were not found,) the upper and lowermost end of a Brass-Pommel, inservient to a Sea-Coal Grate, weighing nine Ounces; a broad Piece

Piece of Lead, three Ounces and half; the whole consisting of twenty eight Pieces of these foreign Bodies, weighing betwixt two and three Pounds. They were found all in a heap, with the largest Ends one way, and the smallest the other; the small End of one of the large Nails was so bent, that it would have made a perfect Circle, had not the Top of the same been bent back again; this End was forked, and wonderfully sharp, as were likewise the Ends of the Compasses: none of them were found polished, neither could I perceive either the Brass or Lead any ways impaired or endamaged; but the Iron Pieces were extremely corroded, especially one Side of the Knife, which had lain in the Stomach about eight Months (conjectured by being so long missed) and was eaten quite through in two or three Places, especially towards the Blade's End, and three or four of the Nails mightily wasted, as if some particular Menstruum or Dissolvent had been poured upon them, capable only of dissolving that Metal, as *Aq. Regal.* has the Property to dissolve Gold; *Spir. Nitri*, Silver; *Vinegar*, Lead; leaving those other Metals, joined and alienated with them, untouch'd; the Lead had been in the Stomach as long as the Knife, and the Brass-Pin twelve Months and more; it was easy to guess at the time those different Pieces of Iron had been in the Stomach, by considering how much one of them had suffer'd more than another.

This Observation, saith our Author, is like to give a Check to the Notion of those, who believed that Ostridges did dissolve Brass and Iron by Friction only; for if so, I see little Reason why the Iron Branches of the Compasses should have been found so very much worn out, and the Brass Branches not in the least impaired. Mr.

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Rick's Son, who opened him, told me, that the Stomach had been no ways wounded, or endamaged, which was very strange, since the Patient was known to have vomited and evacuated Blood by Stools, six Weeks before he died, as I have before intimated. It may be necessary to remark, that this Fellow, from his Youth, had accustom'd himself to swallow large Morsels Glutton-like, and without chewing, which doubtless made the Passage of the *Oesophagus* wider, and disposed it to give entrance to all those extraneous Bodies. This Idiot, and sometimes mad Fellow, was never known to sleep a wink, though he was often compelled to go to bed, and had, to incline him thereto, been very much harrassed and fatigued before: He was always observed to eat three times as much as the rest of Mankind, and, when furious, to grow quiet at the Sight of Meat.

The History given by *Sir Ch. Holt*, of one *Gobfil*, of *Shelden* in *Warwickshire*, who, for the *Cholic*, at the Persuasion of an old Woman, swallowed a vast Number of *Pebble-Stones*, I think above two hundred, which remained in his Body, is for the Singularity thereof, worthy your Perusal, to be met with in the *Abridgment of the Transactions*, Vol. III. Page 92.

No less is that of *Parey*, concerning the Person by Thieves forced to swallow a Knife, half a Foot long, having an Horn Handle, which continued in his Body for six Months, the poor Man all the time pining with miserable Pains: At length an Abscess arising near the Groin, with vast Quantity of foetid Matter, the same then appearing, was extracted, and reserved by *Dr. Hubert*, a Physician of *Montpelier*.

Joannes Franc. Hildesius reports the Condition of a Rustic, wounded in this Part by a Knife, so that

that at sometimes his Food came forth thereat, which was long time healing; but at length, saith the Author, with I know not what bruised Herbs, it was agglutinated; but not without a Tumour left behind on the Outside, as big as a Man's Fist; which I have often seen and handled, and which gives him, at some certain times, extraordinary Pains.

Fallopious, in discoursing of these particular Wounds, delivers himself thus: *De ventriculo habeo quod dicam; sanavi mulierem & hominem, à quibus egrediebatur cibus & chylus, sanavi mulierem glande percussam plumbeo, ab interiori ac posteriori parte; sed hanc Deus sanavit, quia meretrix quondam fuit, jam caste & sancte vivit: si vulnus insigne autem fuerit in ore ventriculi, tunc succedit mors, propter præstantiam partis, & ob nervum quem habet cum corde & omni genere nervoso, syncope succedens, ac totius corporis defectus.* De Vuln. cap. 20.

But I shall now finish this Subject, of the Wounds of the Ventricle, with two or three short Cases thereunto relating, extracted from the foregoing History of the *Prussian Swallow-Knife*.

Being in *Morocco*, saith our Historian, there repaired unto me a *Moor*, of the Tribe of the *Sabonetes*: this Man being wounded some three Inches above the Navel, by a *Turkish Haniarr*, as he reported, which is a crooked broad Knife they wear about them; and, which indeed was a kind of Miracle, without Fever, or any other Symptom, walking for six or seven Days about his Affairs, only applying a little Honey to the Wound, their common Medicine; 'till at length, by Inflammation and Rottensness therein, the Want of convenient Helps to Digestion and Absorption, he was a little vexed with Pain, and there-

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therefore desired my Aid. As well as the Place could furnish me with Remedies, I resisted the Accidents appearing, and, having somewhat perfected the Work of Digestion, I perceived a Portion of Broth to issue at the Wound, which, but a small time before, he had received at a Jew's House of his Acquaintance; therefore, concluding the *Ventricle* to be perforated, I advised him of the Danger; which he making a light account of, applied himself to his Labour, which calling him thence, he requested me to give him some of the Balsam I administered to him, that he might finish the Cure in his Absence from me; to which I consented, and, in three Weeks after, he returned in perfect Health: The Medicine was framed of the following Ingredients; *Herbar. Hyperic. Centaur. Calament. Meliss. Pulegij, Rorismar. Spica Nardi, Thymi, Satureia, Absinth. in Oleo infus.* to the Expression I put in *Azibar*, being a kind of coarse *Aloes* they have there, *Terebinth. Resina, Cera ac Mel*, which were dissolved in the Oil, and boiled gently to a fit Body.

About the same time a *Negro-Slave*, belonging to a *Sbeck* of the East of *Willid-Amar*, being hurt by his Master, under the short Ribs on the Right-side, and his Stomach pierced, was, without any Order of Diet, or bad Accident, healed by the former Medicine, I had just then prepared for some of the King's Eunuchs, that were hurt, and escaped out of the Battle of *Wedlabid*; to the Glory, saith the good Man, of our Omnipotent God, whose abundant Mercies in all things appeareth.

No less surprizing is the Case of the Mariner's Man, (recorded, whether by *Zacut. Lusit. or Alex. Bened.* through Loss of a Memorand. uncertain)

at

at *Dantzic*, who, a few Hours after he had eaten Herring, and raw Cucumbers, was wounded by another, very desperately in the Stomach. The Chirurgeon being called, and perceiving the Wound very large and deep, and apprehending the same might be injured by the Salt Nourishment, so lately taken in, with his Fingers he pulled forth the same, and after successfully healed up the Breach.

All which Examples do surely evince, that the aforesaid *Apborism* of *Hippocrates*, relating to this Part, will admit of Exception; and that, by the Vigour and Strength of Constitution, as we observed at the Beginning of this *Supplement*, many desperate Wounds of the said Part have admitted of a Cure.

Of WOUNDS of the Intestines.

WE shall now, descending lower, speak somewhat of the Wounds of the *Guts*, distinguishing them into the *Crassa*, ac *Tenuia*; the former, being wounded, are allowed, by that great Man, capable of Consolidation; the latter, viz. *Tenuia*, numbered among the Mortal; which, besides the general *Apborism*, observed in the beginning, is included in his particular one, *Si ex Intestinis tenuibus aliquod dissectum fuerit, non coalescit*.

We have already observed, that the comparative Anatomy is not a sufficient Foundation for us to go upon, in taking Experiments thence, Cat's Guts and Man's being so widely different in their Texture.

We have many Instances of these Parts wounded in Brute-Creatures, and after sowing up again, they have been let go to lick themselves whole

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on the Outside, whilst Nature is playing the Surgeon within: Nay, Dr. *Musgrave* acquaints us, that he took out the *Cæcum* of a Bitch, carefully tying up the Vessels, and stitching up the divided Parts, when, in three Weeks time, she seemed as well as ever, grew proud, and brought a Litter of Whelps: About six Months after he caused her to be hanged, and, when he had opened her, found a great Part of the *Omentum* lie in a heap on the Right-side, not having recovered its natural Posture, since it was put up with the Guts at the former Opening; the Edges of the wounded Guts were well grown together, nor did he find any thing that seemed to intimate the least Want or Supply in place of the *Cæcum* formerly cut out. But the following giving an Account of an Abscess of one of the thinner Guts, in a human Body, sending forth the *Chyle*, and consequently denoting a Solution of Continuity in the same, I shall here transcribe it, from an Extract of a Letter, written by the famous *Dan. Becker*, to *Otho Heurnius*, Professor of *Physic*, in the *Academy of Leyden*, of this Import:

Most Noble *S I R*,

A MATRON here this Year, 1638. of the Age of fifty Years, was much troubled about the Navel, rather beneath, with an *Apo-steme*, which, by reason of many Causes, came at last to be a *fistulous Ulcer*, whereunto the Humors of the whole Body flow'd; and she presently complained of a Pain in the left *Hypochondrium*, where also a Tumour, or Swelling did appear, which of its own accord broke, and closed up again; a purulent Matter, by a *Sinus*, creeping even to the Orifice of the *Fistula*, near the Navel, and issuing forth thereat; by and by followed

Of Wounds of the *INTESTINES*.

lowed a chylous Matter of the Meat she had eaten, which was an evident Sign, that the Gut there residing had suffered a Breach; for ten Days together, of whatsoever she did eat or drink, two or three Houts after, there issued thereby a chylous Juice, to the great Terrour of the Patient and the standers-by.

The necessary Things premised, I prescribed her a Potion from Wound-Herbs, and advised that twice a Day she should take somewhat of this Balsam;

Rx Bals. Simpl. de Mastich. ℥iij. Summit. Hyper. m. j. coque paulisper & exprime.

It is wonderful to rehearse, but, after ten Days passed in that Cure, a perfect Consolidation of the internal Ulcer of the *Intestine* was attained; So that, after that nothing of the chylous Matter issued forth, by the *fistulous Ulcer* under the Navel, as aforesaid; hence we manifestly conclude the unspeakable Power of God and Nature, *God's Hand*, in the curing of Diseases: For which way was it possible the Chirurgeon's Hand should arrive at this secret Ulcer, there to deterge the Matter collected, and to cleanse it? Howbeit, three Months after the Consolidation made, there ariseth, in this wretched Body, a greater Evil; for whereas the Surgeon, contrary to the Charge of the Physician, endeavoured the Consolidation of the *sinuous Ulcer*, under the Navel, behold immediately there is Matter collected about the left *Hypochondrium*, making a new Aposteme; the Opening whereof he neglecting, and the Patient greatly fearing, Nature does it of her own accord, and casteth forth the Matter by the gaping Lips of the *Ulcer*: Some few Days after followeth

loweth a viscos, phlegmatic Matter, such as always lies upon a Man's Stomach: To conclude, whatsoever she takes, issues forth of the *Ulcer*. All Signs, as well of the Matter as of the Place affected, attested, that the *Aposteme* now lurked at the bottom of the *Ventricle*, and, being therewith eaten thro' and opened, yielded vent for the Matter swallow'd. I could not leave this wretched Woman with the *Prognostic*, and destitute of all Help, because as yet she was somewhat strong: I therefore ordered, that she should use, with the *traumatic Decoction*, the consolidating Powders of *Bole*, *Mastich*, *Lilly-Root*, *Quintessence of Crabs-Eyes*, and the like, made up together; and also the following Balsam,

R Bals. Mastich. ʒij. Ol. Hyperic. ʒj. ꝯ. m.

For five Days together she continued the Use hereof, by which the *Aposteme* was admirably healed; so that, after two or three Months space, nothing came forth of what she had eaten: But some three Months past, when the Patient loathed the Remedies directed for her Preservation, and that the Surgeon unadvisedly assayed the drying up that fistulous Ulcer, first appearing under the Navel, near the same Place was Matter afresh collected: This, a long time after, being open'd, all, that she took down, again issued forth as formerly. But I advised her then, that Nature could now no longer endure Medicine, because all the Corroboratives and Restoratives, that were used, made no stay, immediately slipping forth, by the gaping Wound: And she being now spoiled of all her Strength, by this long and desperate Disease, old Age and Defraudation of her Food, at last, without any Trouble

Of Wounds of the INTESTINES.

or Fears of Death, gave up the Ghost. I could willingly have open'd the Corpse, whereby I might have been an Eye-Witness of the Constitution of so great and hidden a Disease; but that she had desir'd not to be expos'd to view; her Kindred also, willing to observe her Desires, suffer'd it not. But I rest, for fear to molest your Excellence. Farewel, and love still, most noble Sir,

Your most Observant,

D. BECKER.

Hollerius informs us of a Person stabb'd into the small Guts, where, the Surgeon taking care only of the outward Wound, and applying his *Agglutinatives*, left the wounded Intestine wholly to provident Nature, which accordingly compleated the inward Work.

Vidus Vidius, as also *Gemma*, have several such Examples.

On the contrary, *Fallopious* affirms, That he knew a Woman, who having received a Wound in the *Intestines*, the same were replac'd, and the *Abdomen* sew'd up; when the Excrements thereof, left behind, eat through some other Part of her Belly, so that she was forced to undergo a second Operation, with great Danger of her Life: An Argument, saith he, that all is not to be left to *Nature*, or natural Heat.

Albucasis says, he sew'd up a Wound in a Man's Belly made by a Knife, the Compass of a Palm long, as much of the Gut having hung out of the Wound for twenty four Hours; that in fifteen Days the same was agglutinated, and that too in a very odd Manner, as you will find by his own Words; *Non curavi ipsum unguento, quoniam fuit*
in

in loco in quo non inveniebatur unguentum, neque aliquid ex medicinis: Posui ergo super vulnus cotem verrucam bis in die, & usus sum assidua ablutione ejus cum aqua mellis, donec sanatum est. Which Case I have set down for the Oddness of the Cure, the *Intestine* not being mentioned to be hurt, unless by being so long exposed out of the Body.

Parey gives us several Examples of Wounds piercing the *Guts*, and passing through the Body, yet being restored: But when he takes notice of the Excrements discharging by the Wound, we are to suppose the *thick Guts* to have been divided.

Abrahamus Margelius, among other his Observations, takes notice of a Person set upon by Thieves, who, having robb'd him, gave him several desperate Wounds, among which one was about two Fingers Breadth above the Navel, the *Guts* starting out of his Wounds. The others being healed, this last remained still open, through ill Surgery, the divided Part of the *Colon* still hanging out, the Surgeon not knowing how to reduce it to its Place; so that growing *callous*, and uniting with the outer Teguments, it appear'd like an *Anus*, frequently discharging the Excrements; upon which account he was forced to wear a Sort of Bag over the Place, to receive the same, living thus for many Years, and not otherwise going to stool sometimes for fifteen Days.

A Case of kin to this is set down by Mr. *Chefelden*, in his new *Lithotomy*; where a Woman labouring under the *Exomphalis*, the Part mortify'd, and the Gut thrust out twenty six Inches and a half, being also perished, he cut off: After which, as the Ulcer healed, the End of the said Gut hanging out thereat, made a kind of *Anus*, through which her Excrement comes out.

Of Wounds of the INTESTINES.

Caspar Baubine, in his *Appendix* to *Rossetus de Partu Casario*, recites the like Misfortune, where upon the great *Apparatus* for the Cure of a large *Inguinal Rupture*, the Surgeon incising the outer Teguments, and dilating the *Peritoneum*, found the *Gut* so implicate with the *Caul*, that he could not reduce the former, till he had separated their Adhesion, in doing which the *Intestine* was wounded; so that, after the *Gastrorhaphia*, the outer Wound agglutinated in such manner, as to leave the *Gut* still opening itself by an Orifice thereat, through which the *Fæces* were discharg'd involuntarily ever after.

Of Wounds of the KIDNEY.

ALTHO the *Kidney* is not particularly specify'd in this *Aphorism* of the great *Hippocrates*; yet have its Wounds been commonly reputed fatal, on account of its Situation, the Blood-Vessels appertaining to it, and its proper Function or Office. Notwithstanding all which, *Fallopious* declares, that he had known the left *Kidney* wounded with a Dagger, and the same healed: *Gemma*, that some Parts thereof were cut away by a *Poniard* thrust into a Woman's Loins. As also *Dodonæus* in *Schol. ad cap. 22. Observ. suarum Medio*.

But the most remarkable Instances we have had of these Wounds, have been such as have been artfully made for the Relief of nephritic Persons, or those afflicted with Stones in this Part. Among which, I think, none more so than that Relation of *Parey*, in *Book xxiv. Chap. 19. ex Monstrelati Chronicis*, containing the Story of a Malefactor 4 Miles from *Paris*, condemned for Theft. The Physicians acquainting the King that many of the Citizens

Citizens of *Paris* being miserably afflicted with the Stone, more particularly one of his Nobles there named, this Criminal also, as appear'd having long suffer'd under the same Disease, 'twas their Request to his Majesty, that a live Dissection might be made, for inspecting more particularly the Seat thereof, and making experiment of the Operation for extracting the Stone, and that his Life might be granted, on that condition, if he survived the same. Accordingly, at the Command of the King, the Section was made; and the Parts being scrutiniz'd, the Body was after sewed up, and the Prisoner in little time recover'd, having his Life bestow'd, with great Rewards for his pains.

But this Relation, as he has well remark'd, *Lib. xxiv. Cap. 16.* is not so intelligibly deliver'd as it ought; for we are not absolutely certain, whether the Stone enquired for was in the *Bladder* or the *Kidney*; and, next, the Place of cutting is not laid down, whether on the *Loins* or other Part of the *Epigastrium*, near the *Iliac*. He says, indeed, the *Intestines* being replac'd, the Wound was sewed up; so that it is very reasonable to believe the Stone must be in the *Kidney* rather than the *Bladder*, because there is mention made of the Prisoner's being subject to a *nephritic Pain*, as also the Side of his Belly stretching down from the *Kidney* by the Passage of the *Ureter*. Besides, this Enquiry being made to discover something new and extraordinary, it must be surely after the Situation of the Stone in this Part, that in the *Bladder* being so well known by Physicians, both *Celsus's*, and *Guido's*, or *Mariana's* Operations, having long since been known and practis'd. Indeed (continues this famous Operator) I must deliver my Opinion, that this Incision was not

Of Wounds of the KIDNEY.

made upon the *Loins*, there being several Impediments, as the great Thickness of the Part, so many Muscles, both external and internal, to be cut through at their Originations, with the Hazard of wounding the Blood-Vessels, and other Parts annexed to those, wherefore it seems more likely to have been made on one Side of the Belly or *Ileum*, between the *Loins* and the Place of the *Cæsarean Section*, higher up than on that where we propose the *Section* of the *Bladder*, for Extraction of the Stone therein: And this we infer from the Expression before-mentioned, of the *Intestines being replaced, the Wound was stitched up*; which could not be, if the Incision had been made upon the *Loins*.

This History I find inserted by that dextrous Operator, Mr. *William Cheselden*, in his Treatise on the *High Operation*, among *Roussel's* Collection of Cases, to justify the same; but I think not so suitably, since it seems rather to countenance the *Nephrotomy*, at least the Section on the *Ileum*, for extracting the Stone from the Kidney; as *Parey* has well observed, notwithstanding whose Opinion of the Improbability of this backward *Section*, yet want we not Examples of the *Lumbar Nephrotomy* itself.

Thus *Albertus* reports he saw a Woman, who, having been long afflicted with the *Nephritic* Illness, the Place being cut into, there were taken out eighteen Stones, of the Bigness of a Die, as you will find recorded by *Cardan*, lib. viii. ch. 44. *de Varietat.*

Whether Nature directed the Knife by any Effort of her own, he does not say, nor by the Words can we infer there was any such thing, which run thus; *Vidi mulierem, quæ cum die conflictata esset dolore Renum gravi, dissecto loco, octode-*

cim lapides emisit, magnitudine aleæ. Some may, perhaps, think the Word *emisit* will argue that Nature had some share in the Discharge, or otherwise the Author would have said, *extracti fuere*. But, to put this matter out of Dispute;

Caspar Baubine makes mention of a young Girl, born of *Nephritic* Parents, who labouring long under Suppression of Urine, a Swelling arose about the Loins, which, having long waited for Suppuration to no purpose, and finding only an Induration on the Part, the Surgeon boldly cut through the same, and drew forth a Couple of Stones; after which her Water came right as formerly, the Wound being healed up. This History, saith he, I had from my Master, *Gulielmus Capellus*, when I was at *Paris*: *Unde liquet (inquit ille) veram esse Hipp. Sententiam quæ habetur Lib. de Morb. intern. calculos nimirum, à lateribus extrahi posse.*

Of a *Section* into the *Ureter*, upon the like occasion, and I must own the only one I remember, there is notice taken by *Joachim Camerarius*, of a Nobleman, exceedingly tormented with a Stone, that had plugg'd up one of the *Ureters*, and could not pass; when the Surgeon, at his earnest Solicitation, cut into the Cavity of the Belly, and, having got out the Stone, heal'd up the Wound, without any Injury after ensuing.

And altho *Parey* seems to lay some Stumbling-Blocks in the way of the *Lumbar Section*, as in the Case of the Malefactor before-mention'd; yet I find *Roussel* has taken pains to prove it practicable, instancing, farther, where it had been done, and even proving, from the Structure of the Parts, that a good Knife's-Man may cut into the same, without dividing any large Vessels; and that both the Muscles, and the Substance of the Kidney, will bear wounding; the whole of the

latter being often found wasted by *Abscesses* and *Ulcers*, that leave little more than its outward *Capsula*, which is found like a Bag full of Sand or Stones: Yet, after all, he owns there are Difficulties in the Way to the Operation; as, the Uncertainty that there is a Stone, which cannot here be explor'd, as in the Bladder; and therefore, he says, it must be the last Remedy, practis'd only, as the *Cæsarean Birth*, when there is no Possibility of delivering the Woman otherways. His Words are these: *Quoad Renem, videtur vulnus non necessario esse lethale, sive spectemus actionem & usum proprium, (modo alter ren sanus & integer sit, suoque satisfaciat officio) sive spectemus ipsius substantiam cum per se satis oblesus, imo sepe ex maxima parte putridus, & per consequens vel ex parte, vel ex toto mutilis, ita ut à bono, & exercitatissimo anatomico, qui solerti sit manu, & in similibus casibus exercitatus, possit facile, & cum honore, hæc sectio administrari, sed in corpore robusto, & cum judicio solum disseccans eum locum ubi calculum persequitur, cavendo, quoad fieri potest, ne vel insertionem venæ emulgentis, vel ureteris exitum ledat; postmodum vero consolidationem naturæ committens, quod à natura præstari id possit, præter rationem non est.* Franc. Rouffet. de partu Cæsario, apud nos, Sect. 3. p. 66.

As to the Cases of *Abscesses*, or *Apothemas* form'd in these Parts, which this Author instanceth to encourage the Section; I must needs think (submitting also with him to better Judgments) these will not bear the *Parallel*; since by receding of the outer *Teguments*, to make way for the said Matter, both Muscles and Blood-Vessels escape the Knife; or, admit the same lie deeper, yet, being thereby grown putrid, no farther Injury can be sustain'd. But generally speaking, so soon as the said *Teguments* are divided, whether by

Knife

Knife or *Caustic*, and the Matter is discharg'd, those foreign Bodies, whether entring first of all from without, or forming themselves therein, giving rise to such Apostems, present themselves to us, and are with ease extracted; which is widely different in cutting upon the sound Parts, where, besides the Uncertainty of lighting directly upon what we explor'd, and the Difficulty to come at it, all the superjacent Parts must be here violated, and the Vessels endanger'd. *Vid. Horst. Epist. Sect. 8. Panarel. Obs. 48.*

Of a contrary Opinion to Monsieur *Roussel*, we find *Serapio*, as may be gather'd from these words: *Quidam* (inquit) *antiquorum sapientum praeceperunt extrahere cum ferro super latus duorum iliorum, in loco renum, ego autem video quod haec audacia difficilis super mortem, propter illam rem per administrationem hujus curationis.* *Pract. Tract. 4. Cap. 22.*

Of the same Opinion seems *Avicen*: There are some, saith he, who attempt to take the Stone out of the Kidneys, by the Incision of the *Ilea*; but there is great Danger therein, and it is an unreasonable Operation. *Canon. lib. 3.*

Cardan, indeed, observing the Neglect of this, and sundry others in his time, thus expostulates:

How many Operations have we lost, which were common in the Days of *Hippocrates*? Even *Galen* has been so far from making Addition, that he has pretermitted many useful Parts of Surgery, practis'd by him; such as the Operation for the *Empyema*, the Cautery for Tumours on the Liver, the Perforation of the *Cranium* in the *Hydrops Cerebri*, the Extraction of the Stone from the Kidney, by Section, and of Water *inter Cutem*: All which, tho' many, saith he, now take upon them to perform, yet not in the Manner done by the Direction of
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the divine old Man, when very many were preserved; whereas now they die under the same, scarce one surviving out of many, notwithstanding their great Pretences to know more than the Ancients: The *Section* of the Eye in Suffusions, with many other most useful and noble Inventions.

Innumerable indeed are the Instances might be given of *Abscesses* in these Parts, through which, being open'd either by Knife or Caustic, Stones have made their way thereby, and the Patient recovered; though not without a *Fistula* very frequently left behind, Of which see *Celius*, chap. 12. *Card.* lib. 8. cap. 42. *Fernel. Patbol.* lib. 6. cap. 12. *Dalechampius*, lib. 24. cap. 18. *Baubine*, in *Prop. Observ. Rouffet.* sect. 3. cap. 7. *Horst. Epist.* sect. 8. p. 418.

But these, as I observ'd but now, are very improper Guides for an Operator to attempt the Opening of the same Parts, without any such Direction, *aut naturâ nullo modo monstrante viam.*

I shall conclude this Head of my Discourse by transferring hither, that memorable Relation of Mr. *Ch. Barnard*, from the *Transact.* of the R. S.

' Mr. *Hobson* (saith he,) who was *Consul* for the
' *English* at *Venice*, having been long afflicted with
' the Stone in the Kidney, was at length attack'd
' with a Fit of that Duration and Violence, that
' it reduced him almost to Desperation; and find-
' ing no Relief from any Means that had been
' us'd, and being under the greatest Extremity of
' Pain imaginable, he address'd himself to *Domi-*
' *nicus de Marchettis*, a fam'd and experienced Phy-
' sician at *Padua*, imploring of him, that he
' would be pleas'd to cut the Stone out of his
' Kidney; being fix'd in his Belief, that no other
' Method remained capable of relieving him; ad-
' ding that he was not insensible of the Danger,

' but

but that Death itself was infinitely more eligible, than a Life in that Misery, under which he had long, and did then groan. *Marchetti* seem'd very desirous to have declin'd it, representing not only the extreme Hazard, but, as he fear'd, the Impracticableness of the Operation; that it was what he had never attempted, and that to proceed to it was in effect to destroy him.

But Mr. *Hobson* persisting, that if he refused it, he would never desist till he found out one that would do it. *Marchetti* was at length, by his Resolution and Importunity, prevailed upon to undertake it; and having prepar'd him, as he thought convenient, he began with his Knife, cutting gradually upon the *Region* of the *Kidney* affected, so long till the Blood disturbed and blinded his work, so that he could not finish it at that Attempt; so that, dressing up the Wound, the next Day he repeated and accomplished it; and by cutting into the Body of the *Kidney*, and taking thence two or three small Stones, he dress'd it up again.

From this Instant he was freed from the Severity of the Pain, and, in a reasonable time, was able to walk about his Chamber; having been in no danger, either from Flux of Blood, or Fever. *Marchetti* continued to dress the Wound for a considerable time, but was not able to close it up, it soon becoming *fistulous*, from the continual flowing of the Urine through the *Sinus*: But being, in all other respects, restored to his former Health and Vigour, and the Matter discharged being little, he took leave of the *Professor*, and returned to *Venice*, under the Care and Management of his Wife; who, one Morning as she was dressing the Sore fancied she felt something hard and rugged, as she wiped it;

‘ it: Upon which, examining a little more carefully with her *Bodkin*, which served her instead of a *Probe*, she found it to be a Stone, of the Figure and Magnitude of a Date-Stone, which being removed, he never after complain’d of the least Uneasiness in that Part.

‘ About ten Years after this, he return’d to *London*, where the learn’d Dr. *Tyson* and myself were, by Dr. *Downes*, who had known him formerly in *Venice*, invited to see him: And, after we had receiv’d this Account from himself, he gave us the Satisfaction of viewing the Sore, which continued open, and permitted me without any Complaint (the *Callosity* being great) to pass my *Probe* so far into the *Sinus*, that we concluded it reached into the *Kidney*; the Matter it then discharg’d was but little in Quantity, but always diluted with, and smelt strong of, *Urine*. The Orifice would sometimes close for three or four Days together, and then the Matter made its way through the common Passage with his *Urine*, yet without any Difficulty or Pain. There is no question but that there was a *Coalition* of the *Kidney*, and the Muscle *Psoas*. When we saw it, he applied nothing to the Orifice, but a clean Linnen-Rag, which had a strong urinous Scent. He was then as able in appearance to perform all the Functions of Life, and to undergo any Fatigue, as any Man of his Years, being then, I conceive, upwards of Fifty, and was next Day to ride Post forty or fifty Miles.

‘ This, I think, (saith our Author, though, I believe, mistaken by what I have discover’d above) is the first Experiment of this Kind. Some Authors indeed have imagin’d, that *Hippocrates* hath commanded the Operation, when

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enumerating the Diseases of the Kidney, and their Cure, he saith, *Quum autem intumuerit & elevatus fuerit, sub id tempus juxta renem secato, & extracto pure, arenam per urinam cientia, sanato: si enim sectus fuerit, fugæ spes est, sin minus, morbus homini commoritur.* And *Sinibaldus*, in particular, upon these Words passionately exhorts the *French* and *Roman* Chirurgeons, to make the Experiment upon Brutes, that they might, with greater Dexterity and Readiness, perform it upon Men: But, with Submission, he seems to infer more from these Words of *Hippocrates*, than they can bear; For it is not sufficient (according to these Directions of *Hippoc.*) that we take our Indications from the common Symptoms of the Stone, be they never so grievous, and never so evident, but there must be an Aposteme, and that too is to manifest itself externally in a Tumour; and then indeed the Necessity and Reason of the Operation are so obvious, and the Difficulty so little, that no Man ought to decline it: Nor do we want Instances of Apostemes in the Kidneys, occasion'd originally from the Stone there, and, manifesting themselves by a Tumour, upon opening of which, Stones have been discharged with the Pus or have been soon after remov'd: And this is the very Case which *Hippocrates* supposes, and upon which he justly advises the Practice: But 'tis my Opinion, that we have no manner of Evidence, that *Nephrotomy* (restraining its Signification to cutting into the Kidney for the Stone) was practis'd in his time, or for many Ages after. For *Celsus*, although he be very particular in his Discourse of Cutting for the Stone in the Bladder, is silent in this Matter: And *Galen*, who is copious enough on Diseases of the Kid-

ney,

ney, especially the Stone, mentions it not; and indeed there are no Footsteps that I can discover among any of the *Greek* or *Latin* Physicians.

The first Light, that I can pretend to discover the Operation, as practis'd in our Case is amongst the *Arabians*, *Serapion*, who is placed by *Wolfgangus Justus*, between the Tenth and Eleventh Cent. (though by *Ren Moreaux* three hundred Years earlier,) gives his Opinion of it thus, *Quidam antiquorum praeceperunt*, &c. (as I have already noted.) Who these Ancients were, that advised it, I confess to be beyond my Conjecture, unless we may be allow'd to say, that he also had misunderstood *Hipp.* as some have manifestly done since. Betwixt 12 and 1300, *Avicen* had much the same Opinion, both of the Practice and the Practitioners, *Sunt qui laborant extrahere ipsum per incisionem illi & per dorsum, sed est magnus timor in eo*, &c. (as also above.) The difference of their Sentiments being only, that one thought it the Undertaking of a *Madman*; the other of a *confident Fellow*: But from *Avicen's* Words there is some colour to believe it was practis'd in his Days; though undoubtedly if it were, from his talking so slightly of it, it was only by Persons of mean Character, such, perhaps, as our *Mountebanks*, who, having no Regard or Concern for the Lives of Men, and little Reputation of their own to lose, venture boldly, and sometimes successfully, upon those Things, which wary and more judicious Men avoid: All the Rest of their Writers are silent.

Among the Moderns, as well as I can inform my self, *Fr. Rossetus* seems to have been the first, who seriously advis'd this Practice; but notwithstanding his Zeal to bring this Opera-

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tion into Use, and though he urges *Hippocrates's* Authority, to justify the Cutting into the Kidney, is yet so ingenuous as to acknowledge, *Præsentē tumore, nec aliter, Hippocratem imperare Sectiōnem*; and, as plausible as his Reasonings may seem, it does not appear, that he hath been able to gain many Profelytes to his Opinion: The Sense of those Authors, who have mentioned it (who are not many neither) being generally against it, and concluding in effect with *Riolanus*, *Nisi natura dirigente viam, atque præcunte, nefas est tentare nephrotomiam*: But altho' it appears to be the concurrent Opinion of those Authors, who have treated of Wounds of the Kidneys, that if they penetrate the *Pelvis*, they terminate in Death; yet the Experiment above related shews us, that they ought not to have so magisterially exploded the Operation.

Tho' I would pay all imaginable Deference to the Memory of this learned Man, yet I can't think this Experiment of Marchetti's to be the first of the kind; nor, from the Words of Cardan's Exclamation, that it was unknown to Hipp. As to Galen's Silence, we find it one of the Complaints, that he had pretermitted other Operations as well as that: And in respect to those Words, *Præsentē Tumore*, there could surely be nothing of Discovery therein, since the learned Man himself owns, we want no Instances of *Apostemes* in the Kidneys, manifesting themselves, outwardly; or bursting also of themselves, or being opened, Stones have been extracted: And if, by the same Words, he means other than an Abscess, there must be greater Danger in cutting through such a Tumour, than if there had been none at all. But indeed the Dispute seems little other, than that *de Lana Caprina*, because this great Man has tacitly given it up himself, viz. That the Lumbar-Section was known,

known, and practis'd too, by some of the Antients, as may be inferred from the Words of Serapio, *Quidam antiquorum præceperunt, &c.* and those of Avicen, *Sunt qui laborant extrahere, &c.* Dropping now the farther Pursuit of this Argument, and, with this worthy Practitioner, leaving the Operation to be pursued by Mountebanks, as fit, in my Opinion, for no other, I shall come to the Wounds of the Uterus, or Womb, not as a Part pronosticated of Hipp. but as contained in the same Cavity, and its Wounds look'd on of great Importance.

Of WOUNDS of the Womb.

THE Situation here is indeed such, that many nervous and membranous Parts must suffer a Solution, whence bad Symptoms may arise, before the Body of the Womb itself can be pierced; such I mean as the *Aponeuroses* of the *Abdominal Muscles*, as well as of the *Peritonæum*, whence, if any mischievous Symptoms happen upon those Hurts, they may spring more likely than from that in this Part, which we are now to consider in a double State, viz. that of *Pregnancy*, and that without *Conception*: In the former *Roussel* has said so much, in his *History of the Cæsarean Section*, as leaves no Place of doubting, that these Wounds are not absolutely mortal, though exceeding perilous; and if, as these times, the said Part will admit of such a Gash, as to take out a *Fetus* at full growth, the lesser Breaches therein, may doubtless, more easily be agglutinated.

I have myself, among the Diseases of Women in Child-bed, given you an Instance of this Part, suffering large Apostemation; and great Numbers I could add, not only from the last-recited Author, but many others, as *Mauritius Cordens*,
Caspar

Caspar Baubine, Langius, Marsilius, Donatus, Balduinus, Hildanus, and, one as memorable as any, Ægidius; from whom we have Accounts, that Abscesses being formed therein, not only dead Fetus's, but their Parts, grown putrid and thrown forth, have been extracted, some near the Navel, others at the Groin, and the Ulcers after healed up again.

As to the State of the Womb without Conception, I have likewise given Instances, when speaking of the *Procidencia*, where the same has been entirely cut away; and one very remarkable, of my own Knowledge, where the *Cervix* was cut off by an old Woman, who, since the printing the first Edition of this Book, is perfectly sound and whole, as hearty, or rather more so, than for twenty Years past.

The last I shall descant upon are the *Wounds* of the *Bladder*.

Of the B L A D D E R Wounded.

THESE are expressly denounced *Lethalia*, in the fore-cited *Aphorism*; an Exception indeed was made by some as to the Wounds of the muscular Part, or *Sphincter*, which was supposed to be cut, in the old Way of *Lithotomy*; but the membranous Part, so called, has, by means of this Sentence, *Cui perfecta est Vesica*, &c. of that sage old Man, been generally and almost inevitably deemed mortal, 'till, upon the late Revival of *Franco's*, called the *High Operation*, this long received Opinion has been irrefragably contradicted.

I shall not here spend your time in tracing the first Inventors, nor meddle with the Contests,

which have lately arisen about the same, already published by the contending Parties. It must be own'd, that this most excellent Operation has been of late brought into Practice with us by Mr. *Douglas*, the Surgeon, and pursued with Improvements by the Gentlemen of both Hospitals; and that with such Success, as may, I hope, encourage its Continuance, if not in the Adult or Antient, at least in the younger and well chosen Subjects.

Dr. *John Bamber*, and Mr. *John Dobyns*, my two particular Friends and Acquaintance, I have seen operate at St. *Bartholomew's* with great Dexterity, and have after view'd their Patients, where I have been Witness of the large Solutions of Continuity this Part of the Bladder undergoes; yet, by help of a Medium furnished by its Sides, after Digestion, together with that from the superincumbent Parts, the same in little time consolidates, and is perfectly agglutinated. Nor indeed does it seem more strange, if we rightly consider, that these Wounds, especially by simple Incisions, should admit Curation, than those of the *Pleura*, *Peritonæum*, the *Guts*, the *Stomach*, nay the *Meninges Cerebri*, which are still more membranous and nervous, yet are often healed.

Joannes Kentmannus relates, that in the Year 1558, in the Wars betwixt the Kings of *France* and *Spain*, two Noblemen, in their March with other their Companions, falling out, the one received a Shot against his Pouch, cas'd over with Steel, whence grazing, it enter'd a Hand's breadth below the Navel, into his Bladder, where it lodg'd. Upon receipt of the Wound he fell from his Horse, and, being supported by some of the Life-guard, was brought to *Lyssick* to be dress'd,

dress'd, where the Surgeons, exploring his *Wound*, and observing its Penetration to the Bladder, dressed him up, and left him as desperate, or past help, from this Sentence of *Hipp. Plaga vesicae influcta insanabilis & mortifera*. Recovering his Intellect, he gave Orders to his Servants, that, whether living or dying, they should immediately carry him home; where being come, he sent for that most skilful Practitioner, *Leonbardus Wolzius*, together (saith our Author) with myself, telling us what had befallen him, and importuning our Assistance in his deplorable Condition.

Having loosen'd the Bandage, and inspected his Wound, my Colleague was of the same Opinion, that it must be inevitably mortal. However, we jointly agreed to assist him in all we could.

For eleven Weeks his Urine pass'd by the Wound, and not by the common Passage; during which time a certain glutinous Humour, mixing with the Salts thereof, together also with the *Sanies* flowing from the Wound, adhered, like a stony Substance, round the same; insomuch that at length the Passage for the Urine, as well as Matter, was in a manner shut up by this petrifying Concrete; and we were obliged, with our Instruments, to break off, and clear away the same, when the Urine came forth afresh.

This Concretion resembled those Lapidescencies or Coagulations in the Baths, compos'd seemingly of a Heap of Sand plaister'd together.

At length, having clear'd the way, and deterged the Wound, it began to shew a Disposition for healing; and quickly after, contracting and drawing into a narrow compass, at last closed up, and was perfectly consolidated, the Urine now taking through its proper Channel.

Of Wounds of the BLADDER.

This Story is also deliver'd by Mr. *Chefelden*, among *Rosset's* Cases, under the Name of *John Centiman*, with this farther Variation, that whereas he recites the Rencounter between two Troopers, *Schenkius* calls them *Duo Nobiles*, the one called *Calcbreus*, who gave; the other (as he observes) *Conrade de Bernheim*, received the Wound. The Case, he says, was set forth by *Gesner, ex Kentmanni libello de calculis in humano corpore re-pertis*.

But waving this, as nothing material to the Case itself, I shall only observe to you, that the Concretion, here taken notice of, is the same usually attending those Patients, who are now cut for the Stone above the *Os Pubis*; spoiling the Digestion of their Wounds, and retarding the Cure: A large Quantity of which, like the *Loam* from a Wall, in the nature of *Slough*, when I last visited these Patients, about a Fortnight after cutting, I saw my Friend, Dr. *Bamber*, take off from a Wound, of the Thickness of half an Inch, and the Compass of a Crown-piece; when, by the next Dressing, such another probably was collected, 'till the Ulcer drawing into a narrow compass, and the Urine taking its old Course, the Coagulation of the urinous Salts no longer appeared.

The same Person, in his tenth Table, before his Treatise formerly observed, has delineated a Stone formed on the Side of a Musket-Bullet, shot through the upper and back Part of the Thigh, into the Bladder of a Soldier, at the Siege of *Lisle* in *Flanders*, who was cut (the old way) the Spring following; together with two others, the one of a Stone formed upon a Needle, the other at the End of a Bodkin.

Falho-

Fallopious recites such another History, where the Bladder was perforated with a leaden Bullet, in his *Traët. du Vuln. Abdom.* cap. 20.

Felix Platerus observes the Case of a Person gor'd into the Bladder, just above the *Pubes*, by a Bull, whence his Urine discharged into the Cavity of the Belly, being cured by the Surgeons of *Montpelier*; he lived long time after in good health: Whence, saith he, 'tis plain that Wounds of the Bladder will admit of Cure sometimes, as well as others. His Name-sake also, *Felix Wurtz*, takes notice of one stabbed into the same Part with a Knife, at which his Urine gushed out, and continued discharging some time; 'till the Wound after was agglutinated, and healed up. And a History, as worthy of being transmitted to Posterity as either of the foregoing, has been given in to the Society, by Mr. *Probye*, of this Import.

' *Dorcas Blake*, in *Dublin*, a full-body'd, sanguine Maid, about twenty Years old, was much troubled with a Hoarseness last Winter, for which she was very desirous to take a Vomit; but her Friends not consenting to it, she endeavoured to provoke one, *Jan.* 5. 1694, by thrusting her Finger into her Throat; which not answering her Desire, she drew an Ivory Bodkin of four Inches long, out of her Hair, and thrust the small End forward into her Throat; upon which she heaved so often as put her out of Breath, and obliged her to stand upright to draw some Air, which she did without taking the Bodkin out of her Throat; when, at that Instant, it slipped from her Fingers, passing into the Stomach. She found no immediate inconvenience, but, the next Day about Noon, felt a sharp pricking Pain on the Right-side of her Belly, lower than the Navel; and toward Evening

Of Wounds of the BLADDER.

' she felt the same nearer her right Groin then
 ' before; which obliged her to go to bed, where
 ' she lay restless all that Night, by reason of the
 ' excessive Pain. *Jan. 7*, A Midwife searched her,
 ' and said she felt the End of the Bodkin, but
 ' thought it was in a Gut. *Jan. 8*, At Night she
 ' sent for me; in searching her by the *Anus*, I
 ' could not find it, but putting my Finger in the
 ' *Vagina Uteri*, I felt the Bodkin; and, because
 ' she complained of Difficulty in making her Wa-
 ' ter, I made use of my Catheter, and felt it, as
 ' I conceived, in the Bladder; but, immediately
 ' trying a second time, I could not find it.
 ' Within a Fortnight after, it was very plainly to
 ' be felt; and about ten Days after this, her Bo-
 ' dy being duly prepared for the Operation, I
 ' attempted to extract it, after the same manner
 ' as I do Stones from Women: but having intro-
 ' duced my *Forceps* into the Neck of the Bladder,
 ' and very readily taking hold of the Bodkin, I
 ' could not move it; I then passed my Finger
 ' through the Dilatation into the Bladder, and
 ' try'd to bring the whole Bodkin into the Blad-
 ' der, but could not; nor could I turn it one way
 ' or other, but round like a Spindle; the smaller
 ' End, as I imagined, resting upon the *Ischium*.
 ' Finding all my Attempts to be fruitless, I de-
 ' spaired ever to effect it this way, which made
 ' me desist from farther Trial: But after some
 ' time, her Pains increasing, she prevailed on me,
 ' by her daily Importunity, to attempt the ex-
 ' tracting of it in the manner of the *High Ope-*
 ' *ration* for the Stone; which was as follows, Dr.
 ' *Madden*, Dr. *Molineux*, and Dr. *Smith* being pre-
 ' sent. Having placed her in a convenient Posture,
 ' I put my Finger into the *Vagina Uteri*, and felt
 ' the Bodkin lying close to it on the Outside;
 ' whilst

' whilst I held my Finger there, I pressed with
 ' my left hand above the *Os Pubis*, where I felt
 ' the Head or thick End of the Bodkin; I then
 ' removed my right hand, and desired Dr. *Smith*
 ' to put his Finger into the *Vagina*, as I had
 ' done before, and press hard against the Bodkin;
 ' which he did, and held it very firm and steady,
 ' whilst I made an Incision, about an Inch and
 ' half in length, on the Outside of the right *Mus-*
 ' *culus Rectus*, 'till I came to the Bladder; I then
 ' passed my fore Finger and Thumb into the
 ' Wound, and got hold of the Head of the Bod-
 ' kin, the Substance of the Bladder only being
 ' between; upon which, with a small crooked
 ' *Bistore*, I cut the Bladder, and, by the gentle
 ' pressing my Finger and Thumb, the Bodkin
 ' slipped out of the Bladder between them, by which
 ' I very easily extracted it. I dressed the Wound,
 ' and put her into Bed; and, in less than a
 ' Month, by God's great Blessing, she was per-
 ' fectly cured.

' Jan. 10. 1695, The young Woman went be-
 ' fore the *Lord Mayor*, and made Oath that the
 ' above Relation was true in substance, and that
 ' she did swallow the Bodkin therein mentioned,
 ' which was cut out of her Bladder that Day
 ' nine Weeks she swallowed it.

' There was but one Half of it in the Bladder,
 ' which was incrustrated with a gravelly, calculous
 ' Substance or Matter, the other Half was out of
 ' the Bladder in the *Pelvis*, the Point resting upon
 ' the *Ischium*. See *Philos. Transact. Abridged*, Vol.
 III. Page 161, where an Icon of the Bodkin is
 fairly delineated.

With this History I had intended to have clos'd
 my *Supplement* of Extraordinary Cases; but, light-
 ing accidentally of one far exceeding all the rest,

A very Remarkable CASE.

I shall here give you an Abridgment thereof, and leave you, as you stand severally disposed, to account it *vel Mendacium vel Miraculum*; for if not the former, it must be incontestably the latter.

A very Remarkable CASE.

In the Year 1682, was published a *Latin* Treatise, entituled, *Religio Philosophi Peripati discutenda, in qua offertur Epitome Processus Historiæ Celeberrimi Miraculi, à Christo nuperrime patrati, in Restitutione Tibiæ abscissæ & sepultæ: Authore Reverendo admodum P. F. Francisco Davenporto, vulgo à S. Clara ac Theol. Doct. Almæ Provinciæ Angliæ Frat. Min. iterato Ministro Provinciali, ac Seren. Mag. Brit. Regiæ Catherinæ Theologo.*

This Book was printed Abroad, and, being scarce, I thought it might be acceptable to some Readers, if, as above, I entertained them with an Abstract thereof, in Relation to the Fact, as there set down.

The Author, it must be owned, has shewed great Learning, and much Reading; having spent above an hundred and fifty Pages to prove the same a true Miracle, (and so doubtless it was, if true) by no means reconcileable to the *Peripatetic Philosophy*, or *Aristotle's Physics*; and could not be brought to pass by any natural Cause, the Force of Imagination, Celestial Influence, Art-Magic or Sorcery, the Power of Demons, or any other than a Divine, Supernatural one, bringing the same about.

It is dedicated to my Lord Henry Howard, descended from the Dukes of Norfolk: The Occasion of the Publication he says was this:

During

During the time of the Civil Wars, he went (I suppose a voluntary Exile) to *France*, when he happen'd in Company with a *Scots* Nobleman, Sir *Walter Stuart*, a Protestant, together with his Excellency Sir — *Hopton*, late his Majesty's Embassador there, who were both of them just come from *Spain*, where they jointly, in the most serious manner, related the wonderful Prodigy wrought by a divine Power, falling out whilst they were in that Country, with which he is going to acquaint his Reader, as the same was communicated to his Catholic Majesty, which being drawn, as well in *Latin* as *Spanish*, they presented to the Author for his Opinion; not concerning the Truth, for that it seems was indisputable, having had such a Multitude of Eye-witnesses to testify the same: But the *Mundus*, or $\sigma\tau\iota$, *vel* (ut inquit relator) *de ratione Miraculi, quod demirari possunt homines pij, discutere fortassis non possunt, credere certe nolunt Protervi Hagiomachi.*

When he had drawn up his Thoughts, according to the Physics he had imbibed at *Oxford*, where I find he had been matriculated, and digested them in order, he submits the same to one of the ten Censors of our College, Dr. *Robert Flood*, whom he complements with the Title of *Medicorum Coryphæus*; and after, with great Devotion, dedicates the same to all *Christian Philosophers*.

Detaining you no longer with the *prefatory* Part, much less the *argumentative*, consisting of several *Disputations*, with each divided into divers Sections, I shall now hasten to the *Process* it self, as it was drawn up for the Perusal of his Catholic Majesty; which begins thus, *In Dei nomine, Amen.*

Noverint

Noverint Universi, &c. That in the Year of our Lord 1641, the sixth of *April*, in the City of *Saragossa*, before the most Reverend *Peter Apaolaz*, by the Grace of God, and the apostolic Chair, Archbishop of the same Place, and Counsellor of the King, &c. in a certain Process and Cause drawn up in the said Bishop's Court, upon the Oaths of the most illustrious the Chancellors, and others, of the University of the same Place, signed by the Notary and Advocate, then present, being certified of the Truth of the said Miracle, depone as follows, *viz.*

That *Michael Joannes Pellicerus de Calanda*, in the said Archbishoprick, was received into the Hospital of the blessed *Maria de Gratia*, in this City, on account of an Infirmary in his right Leg, which said Leg (the Disease increasing) being afterwards cut off, was buried in the Camitery of the said Hospital; and after more than two Years, as is deponed by the said Witneses, the very Evening of this Miracle, which happen'd the last Day of *March*, in the present Year 1640, an Hour before he, the said *Mich. Joan. Pellicerus*, went to Bed, several of the said Witneses found him beginning on his Crutches, and with their own proper Hands felt on the *Cicatrix* of the said Stump; and soon after he, the said *Michael*, was in Bed, his Parents entering the Room upon some occasion, found the said *Michael* their Son, fast asleep, with both his Legs. Being astonish'd (as surely well they might), they called aloud, to waken him; at which another Witness, being at the Fire-side in the next Room, ran in, and beheld the said *Michael*, who just before had but one Leg, now, as formerly, with both. Being interrogated by his said Parents, How this could come to pass? he answer'd, He knew not; but that presently

ently after he went to Bed, being seized with a profound Sleep, he dreamed that he was in the Chapel of the V. M. *de Pilari*, anointing his Stump (as he had used) with the Oil of the Lamp there burning; he did therefore believe this Miracle was wrought by the said Virgin, for that, getting up to his Bed, he had most earnestly and devoutly recommended himself to her Protection. Upon this several other Neighbours were called in, who, in like manner as the other, together with the Parents of the said *Michael*, depone, that they found, to their great Astonishment, him, the said *Michael*, who, the Day before, had but one Leg, and a Stump, which they themselves had handled, now to have two; and farther, that by some Signs, formerly manifest, and given them by the said *Michael*, they do find the said miraculously restored Leg (*bating, doubtless, the Infirmary*) to be the same identical one which had been taken off, and buried so long time since, the said Signs or Tokens he had mention'd, appearing to these Deponents. And, farther, it appears manifest, from the Depositions of a vast Number of other Witnesses, coming in the Day after to view this Miracle, of the Leg thus miraculously restored; when, together with the said *Michael* accompanying them, they went to Church, the said *Michael* walking on both his Feet, praising God, confessing his Sins, and receiving the holy Sacrament of the *Eucharist*; the whole Multitude being amazed, and wondering at what had befallen the poor Cripple, whom they knew so well before, and had seen so often with one Leg, begging Alms from Christian People, for the Support of himself and his aged Parents, from his Lodging *de Canada*, to the said City of *Saragossa*. And farther, the said

said *Michael*, for himself, depones, That whilst he was under the great Pain of *Amputation*, or dismembring, especially the cauterizing or burning of the Stump with the hot Iron, he fervently (*ex toto corde*) invoked the Aid of the said B. V. M. commending himself to her under his said Agonies; after which, whilst the Stump was yet tender, or not thoroughly skin'd over so that he could bear upon his wooden Leg, moved with the same Devotion to the said V. M. he made shift to crawl to the Chapel of the said V. returning Thanks to God for his so late Escape out of extreme Danger, by the said Amputation, dedicating himself, and his whole Life after, to her, the said B. Virgin. And, again, that so often as he went to the Chapel, the Stump, as before, still tender, he took some of the Oil from the Lamps in the said Chapel, and therewith anointed the tender Parts; of which acquainting Monsieur *Estanga*, Master-Surgeon of the Hospital above-mentioned, with what he had done, he was caution'd against using thereof, as injurious to the Wound, through its too great Unctuosity; yet, notwithstanding, he, the said *Michael*, did not refrain the Use thereof, as often as he had opportunity.

The Rest of the *Process* (too tedious to recite) is made up of farther Evidence to the Truth of the Premises, with a Comparison betwixt this and some of the *New Testament* Miracles, endeavouring to prove the same of like Kind; and that no Art, Fraud, or Collusion, could be practised in an Affair visible to the Eyes of an infinite Number of People: This *Process* having the Approbation of more than twenty *Bishops*, *Canons*, *Priors*, and others of the Clergy (*but all of them, doubtless good Catholics*) together with the *Archbishop* himself,

himself, signed by the *Apostolic Notary*, and principal Secretary to the *Ecclesiastical Court*, in the said City of *Saragossa*, in the said Year 1641.

I have, Gentlemen, set this Case down as I find it, and must leave you to credit or discredit the same, as you think fit; for my part, I must confess I don't think the better of it for falling out in a Popish Country, where the Priests have been too guilty of foisting in *De-lusions* and *Impostures*, for propagating the Church Interest, and making *Profelytes* to their Religion, which now only pretends to the working of *Miracles*. It was affirmed, as *Father Davenport* says, for Truth, by *Sir Walter Stuart*, a Protestant, as well as by the *Embassador Hopton*. What *Dr. Flood's* Opinion thereof might be, we know not; this I must farther say, that it smells so strong of the superstitious and idolatrous Worship, practised in the Church of R—, and so level'd for countenancing the Invocation of Saints, particularly that of the *V. M.* who has an infinite Number of Chapels, resorted to, and enriched by this Sort of devout People, from like Wonders reported to be wrought therein, that I can think it fit only for a Place in the *Golden Legend*; for which I know I must be deem'd *Hæreticus*, by those in Communion with that Church, if not an *Hagiomachus*, which, I hope, notwithstanding, I am as far from, as any Man whatever.

Somewhat of kin to this, and, I doubt, of the same spinning, I have read in *Lycosthenes*, *Lib. de Prodigiosis & Ostent*.

In the Year 937, saith he, *Leo* the VIth enjoying the Pontificate, the left Hand of a Man was amputated, and almost a Year after the same was restored to him again in his Sleep, a bloody Circle round the Place (saith the Historain) still continuing to confirm the Miracle.

POST-



POSTSCRIPT A.



WHILST the last Sheets of this second *Volume* were printing off and my self perusing the *History of Physic, from the Time of Galen, to the Beginning of the sixteenth Century, in a Discourse written to Dr. Mead, by the learned Dr. Friend*, chiefly, as the Author terms it, with regard to *Prælice*; I have taken the liberty of transcribing such Parts thereof, as relate more immediately to that of *Cbirurgery*, giving you some short Remarks thereon.

And, *First*, from *Ætius*, he observes the making Incisions on the Legs, for the Cure of the *Anasarca*, as deep as those for *Venæsection*; these not answering, others are to be made upon the Thighs, in the Arms, and *Scrotum*, if swell'd, in order to drein off the Waters; which have been found sometimes to cure the Patient.

This Way of scarifying by the Lancet, the Doctor justly prefers to the Acupuncture, recommended by Sylvius from Avicenna, tho' the former assumes the Invention to himself.

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But as to this Method, the Scarificator used by the Moderns, upon the same account, and on the same Parts, performs with more Ease and Expedition, whatever can be expected from those Incisions; and, as we have observed when speaking of the same Disease, where the Blood is not too much impoverished, or the Viscera putrid, may happen to prove useful, especially corroborative Remedies being given in the mean time.

Secondly, from the same Author, we have the Use as well of the actual as potential Caustery, applied to several Parts of the Body, for the Cure of the Palsy; one particularly in the Nape, two on each Side, three or four on the Vertex, from whence, kept open long enough, he doubts not the Recovery. The same in an inveterate Asthma, where all other Remedies have been tried in vain; and here he sets one on each side, near the midst of the joining of the Clavicle, yet so as not to touch the Wind-Pipe; two other little ones near the Carotides under the Chin, one on each side, so as the Causitic penetrate no farther than the Skin; two others under the Breasts, between the third and fourth Ribs; again, two more backwards, towards the fifth and sixth; another on the middle of the Thorax, near the Beginning of the Xyphoide Cartilage; one on each side, betwixt the eight and ninth Ribs; with three in the Back, one in the middle, and two others just below, on each side of the Vertebrae.

Whether or no our Epispastics, and Fontanels, properly seated, may not answer all Intentions, as well of deriving, revelling, and evacuating the peccant Matter of these Diseases, may be questioned by some; but surely we have very few Patients, that will comply with fifteen or sixteen Sores running upon their Bodies at the same time.

Thirdly,

Thirdly, in the *Empyema* and *Phtisis*, from *Leonides*, he mentions the passing a pointed actual *Cautery* through the *Pleura*, in order to let out the Matter: Which I cannot chuse but think a dangerous Experiment, upon so sensible a Membrane, and the End better satisfied by the *Paracentesis*, as now used for the *Ascites*; or potential *Cautery* first laid on the outside, and the *Eschar* separating, or pierced by the *Knife* or *Lancet*, and the Matter let out, a *Canula* passed for the emptying the Remains thereof.

Fourthly, This Practice by the *Cautery*, or *Cauterics* applied to several Parts of the *Thighs*, and round the Joint of the *Hips*, the same Author recommends in the *Ischiadic Pains*, and which truly I have known attended with great Advantage; tho' if our Patients comply with a *Blister* on the Part, a *Fontanel* on the *Thigh*, or, in the most obstinate Pains, a *Seton* under the *Buttock*, 'tis the farthest we can go with most of them.

Fifthly, He acquaints us, from the same Greek Writer, with the *Dracunculus*, a Sort of Worm breeding in the *Legs*, *Thighs*, and *Arms*, especially of the *Æthiopians*; of which, besides what we have published in our Account of the Skin-Diseases, you have two remarkable Instances, in this Treatise, among the verminous Ulcers.

Sixthly, This learned Gentleman, from the *Antients*, very judiciously distinguishes between dis-cutient, and suppurating Medicines, and gives us Directions how to order them so as may best answer the Intention of the Prescriber, without hazard, on the one side, of producing a *Schirrus*, or, on the other, an *Abscess*, if the same may be avoided; which we have also observed in our Account of Tumours.

Seventhly, He proposes Bleeding in all inflammatory Fevers; whether erysipelalous, variolous, morbillous,

bilious, scarlatine, &c. in whatever Stage of the Disease, when the Symptoms run high, or affect the Head, Breast, or other Parts, with intense Pain; which this Gentleman assures us he has frequently tried with great Success, and never once observed, that any of the *Eruptions* sunk in, upon bleeding, where the Distemper required such Evacuation.

With these Accounts from *Ætius*, the first of the *Greek* Authors, he mentions, *Eighthly*, Certain notable Discoveries of Remedies appropriate to some particular Diseases; and deservedly extols the Generosity of their Inventors, in that they freely submitted them to publick Examination; and not, like our *modern Empirics*, making *Secrets* of *Trifles*, and setting up for *Nostrums*: Here also the Doctor very rationally remarks, that whoever pretends to any one, as *universal*, is no other than a Cheat.

From *Ætius* he descends to *Alexander, Oribasius, and Paulus*; the last of which, he says, is very full in describing the several sorts of *Hernia*, whether from a *Distention* or *Rupture* of the *Peritoneum*, with the Method of performing the Operation of Incision, in Cases of Extremity, in order to return the prolapsed Intestine.

And therefore in the *Ninth Place*, An *Inguinal Hernia*, he tells us, according to all Authors, is only the Beginning of an *Intestinal*, (he means doubtless the *Scrotal*); the Gut descending by the *Groin* first, before it can pass into the *Scrotum*: And *Paulus* says, that a *Bubonocoele* always precedes an *Enterocoele*.

Before I proceed farther, give me leave to remark, that these Terms of the *antient Writers*, which are likewise followed by the *Moderns*, are not, I think, rightly, or strictly explanatory of the Distemper now

under Debate; the one implying only the Place, the other the Part falling down: For, properly speaking, an Enteroccele may be also a Bubonoccele, the same Gut lying in the Groin giving rise to the former, which slipping lower, they name, without any regard to the Part it now affects, an Enteroccele. For which Cause, and the clearer Apprehension thereof, in treating of these Distempers, I have chose to distinguish by the general Division of *Herniæ Inguinales*, and *Scrotales*: And speaking of particular *Herniæ*, in respect to the Parts falling down, and giving Rise to the same, as the Caul or Gut, I would chuse rather to name it an *Hernia Omentalis*, aut *Intestinalis*, *Inguinis*, vel *Scroti*: Or, if the Greek Terms are thought more eligible, and the Intestine only descending to the Groin, it is an *Entero-Bubonoccele*; if the Caul only, an *Epipto-Bubonoccele*; if both Gut and Caul an *Entero-Epipto-Bubonoccele*; but if the same Parts, either singly or together, slip down into the Cod, it is an *Enteroccele-Epiplocele*, or an *Entero-Epiplocele Scroti*. The like Oversight, I think, they are guilty of, in that which is called the *Hydrocele*; which, whether the Water be contained in the Cod, or within the Vaginal Tunic, is called still by the same Name; for which Cause I have observed them under the several Terms of an *Hydrops Scroti*, and an *Hydrops Testis*. This premised, I proceed with the farther Notes of this excellent Physician on this Subject.

All Anatomists, as well as Surgeons, have agreed, that, in a *Bubonoccele*, the Gut comes down through the Rings or Perforations of the *Abdominal Muscles*. But tho', no doubt, this be often the Case, yet, perhaps, if we examine the Matter a little more nicely, we shall find, that the same may take another Course, hitherto unobserved, to produce a *Bubonoccele*. The Cavity in the *Thigh*, between the Muscle

Muscle *Pectineus* and *Sartorius*, where the *Crural Vessels* descend, is very remarkable; and the Tendons of the *Abdominal Muscles* lies so loose, that there is nothing but a little Fat, and some membranous Fibres, which separate it from the *Abdomen*: So that we see how easy it is for the *Peritonæum* to be forced down by any Pressure, through this Interstice, into the Cavity we have described; especially since, considering our erect Posture, it lies more in a direct Line, than even the Rings of those Tendons. And if we compare the Accounts of those very Authors, who think that a *Bubonocèle* is always formed in the Processes of the *Peritonæum*, we shall find them often agree to this Place only.

Aquapendente remarks, that a *Bubonocèle*, and a *Varix* of the crural Vein, have often been mistaken (*I should scarce think either by Anatomist or Surgeon*) for a *Bubo*; in which Case, upon Incision, the Gut has been cut, so as to endanger the Person's Life. *Bubo*'s, we all know, are in those Glands that lie upon the crural Vessels; and therefore, 'tis plain, he thinks, in many Instances, that a *Bubo* and a *Bubonocèle* are in the same Place, (*but certainly appear differently, according to the differing descending Bodies out of the Rings of the Processus, to an expert Artist*) that is, in the Place we have taken notice of. Upon this account also it seems to be, that *Celsus* calls a *Bubonocèle*, a *Varix Inguinis*. How proper soever this Expression of *Celsus* may be, upon this occasion, yet surely it is the ready way to confound the Term, where the same is applied to different Distempers.

The late Mr. Serj. Bernard was concern'd in a Case, where the Gut reached under the Skin, to the middle of the Thigh; in which Instance it must descend through the Interstice, under the

Tendons of the *Abdominal Muscles*: For if it had come down through the *Rings*, it must have gone directly into the *Scrotum*, and not have turned down the *Thigh*.

And *Barbet* seems to imply this way, though he has expressed it with the same Obscurity, as other Writers do, when he says, *Experimur etiam processum peritonæi ita posse disrumpi, ut intestina, non in scrotum, sed inter cutem & musculos versus femur, sese urgeant*: Where, by the Words *Processus Peritonæi*, if he means the *Productions*, which arise from the *Vaginal Coat*, we have seen that the Gut cannot pass into the Situation he describes. Perhaps it may give a little more Light into this Matter, if we consider the *Inguinal Hernia* in Women.

Fallopious deduceth it from the *round Ligaments* of the Womb, which make the same Perforations in the Tendons of the *Abdominal Muscles* of that Sex, as in Men.

'Tis very true they do, but not in the same Place; for these *Rings* in Women lye just upon the *Os Pubis*, and the Ligaments, as soon as ever they are passed through them, are strongly inserted with the Tendons into the Bone: So that, by the Streightness of the Passage, there seems to be little room for an *Hernia* here; and if there were, the Gut must lie just forward on the *Os Pubis*, as indeed we find sometimes it does, even as far as the very *Labia Pudendi*. But, I believe, in such *Ruptures*, 'twill be found generally to take its Course much more aside, towards the *Os Ileum*; and therefore *Celsus* expressly says, that an *Hernia* in Women *fit præcipue circa Ilia*.

That the *Peritonæum* may be distended in this Place is plain, from the Account *Nuck* gives us, of a Dropsy in this Membrane, which spread it
self,

self, he says, and formed a Sack in the Thigh, *Per vacua musculorum spatia*: And *Hildanus*, in explicating the Reason of an *Hernia Uterina*, thinks the Extension of the *Peritonæum* happened *circa foramina illa; circa quæ bubonocèle fit in mulieribus*. And if we compare these Words, which are ambiguous enough, and perhaps left so on purpose, with the Description of the Posture that is given of the Tumour, we shall find them only applicable to the Interstice we speak of.

How capable the *Peritonæum* is of a large Distention, an *Ascites* alone will sufficiently convince us; and that such a Distention, as there is generally in the present Case, without any *Rupture*, may happen, not only at its Production in the Groin or Navel, we may find sufficient Proof in the Writers of Surgery.

Barbet gives us Instances of such *Hernia's* in the Back, above the Navel, below the Navel, *Longe supra ilia*, he says, which have been, by Mistake, cut for an *Abscess*.

Paulus indeed distinguishes the *Intestinal Hernia*, as it proceeds either from a *Rupture*, or a Distention of the *Peritonæum*; and says expressly, that this Operation by the Knife is not to be attempted in the latter Case. But whoever, with Attention, considers the Anatomy of these Parts, must, I think, be of a quite contrary Opinion; for, in a *Rupture* of the *Peritonæum*, if this Operation be performed, and the Gut once reduced, we may conceive how all the Parts of the *Peritonæum*, as well as the rest, may be so healed and united, as not to give way to any Descent of the Gut for the future: But in the Case of Distention, if after the Operation the *Peritonæum* remains distended, as it must, how is the Return of the *Hernia* prevented?

To form a right Notion of such a Distention, one ought to see the curious Preparations of that diligent and accurate Anatomist, Dr. Douglas, who is the first that has given us any true Idea of the *Peritonæum*, a Part which is so much concerned, and whose Structure should be so much considered, not only in this Operation, but in the *high Way* of cutting for the Stone. He too is the first who has plainly shewn, that the Elongation of the external *Lamella* of the *Peritonæum* does not form the *Vaginal* Coat of the Testicles, as Authors say, but a Coat peculiar to the Seminal Vessels, which he very properly calls, *Tunica vasorum spermaticorum propria*: And he afterwards observed, in reading *Paulus*, that this Coat was known to, and described by him, by the Name of *ἐλικοειδής*, from the many Contortions there are in those Vessels which it covers. *Cornarius* and the rest of the Expositors, not having any notion of such a Coat, correct this Word, and would have it read *ἐρυθροειδής*, and so confound it with the *Vaginalis*.

From hence he proceeds, *Tenibly*, from the same Author, *Paulus*, to acquaint us with the tranverse Section of the Arteries, especially behind the Ears; and afterwards cauterising of the same, for Defluxions and other Diseases of the Head: Which was the only *Arteriotomy* of the Antients different from the Lancet, as used in *Venesection*, though rarely by the Moderns.

And this, *Eleventbly*, ushers in his Discourse of the *Aneurisma*, which the Doctor will have only from a *Rupture* in both Coats of the Vessel, or a *Puncture* of the same externally: Finding fault with the Division thereof, into *genuine* and *spurious*, and allowing of no other, than what ariseth from *Anastomosis*, and that which follows upon

upon a *Rupture*, as aforesaid: The former being more oblong, and lying deeper, and, upon the Impression of the Finger, making a sort of Noise; whilst the other are generally more superficial, and lie rounder, without any such Noise attending them.

But I have said enough, when speaking upon this Subject, to supersede any thing farther thereon; where I distinguished the same Disease, as from *Dilatation* of the Coats of the Artery without a *Rupture*, or from a Breach in the same, by which the Blood is effused round about: And here I must readily concur with this learned Man, that neither *Venal* nor *Arterial* Blood, so far as regards the grumous Part, or *Craassamentum*, divested of the serous Vehicle, being extravasate, will turn to *Pus*.

Twelfthly, He describes the *Laryngotomy*, called otherwise *Bronchotomy*; the Method of which is here laid down, and the Practice justified by some modern Examples; among which a Reference is made to one we have recited at large, among the Wounds of the *Aspera Arteria*, from the *Philosophical Transactions*.

Thirteenth, Another Operation, never before described, is the Manner of taking off the overgrown Breasts of Men; Cases however so seldom happening among us, so as to stand in need thereof, that I think it not worth While to say more about it.

In the *Fourteenth*, and last Place, at least that I shall now remark, he enquires into the Rise of the *Chymical Pharmacy*; the Foundation of the *First Hospital* for the Sick and Maimed; with the Growth and Vertues of certain simple Remedies; concluding, as he began, with a due Encomium

mium of the *Antients*, quoting Mr. Serj. Bernard, who has given them a very just Commendation; exhorting the young Practitioners to be more conversant with their Writings, and deservedly reprehending some old ones among us, who, notwithstanding they have taken upon them to decry the antient Writers, are yet so entirely unacquainted with them, as to be ignorant of the Language in which they wrote.

F I N I S



I shall now recapitulate the chief of the Observations, and the Foundation of the Cure, for the Sick and Maimed; with the Growth and Venues of certain simple Remedies; concluding, as he began, with a due Praise.

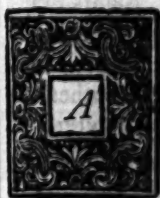
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TABULA ÆTIOLOGICA :

Giving an Account of some hard Words contain'd in the foregoing Sections, with their Derivations both from the Greek and Latin ; for the Benefit of such who are less conversant or acquainted with those Languages, here explain'd, and alphabetically digested.

A



Abdomen, the Belly, or, as call'd by Anatomists, the *lower Belly*, to distinguish it from that above, which they named the *middle Venter* :

It is so term'd, according to some, ex *abdo*, signifying, to hide ; for that the *Intestines*, and other Bowels, lie as it were hid or conceal'd therein. Its Forepart is divided in the *upper Region*, named *Epigastrium*, ex *ἐπι*, *super*, & *γαστήρ*, *ventriculus*, as lying over the *Stomach* ; the Middle, *Umbilicalis*, as comprehending the *Navel* ; and the Lower, *Hypogastrica*, ex *ὑπο* *sub*, & *γαστήρ*, as before ; the Sides called *Hypocondria*, in the superior Parts, ex *ὑπο*, *sub* & *χόνδρος*, *cartilago*, the inferior, *Ilia*, the *Flanks*, near adjoining to the Bones of the same Name.

Aberration, ex *aberro*, to wander out of the way ; here meant of *Nature's* sometimes deviating from her usual Proceedings.

Ablatation, ex *ab* & *lacte*, the taking a Child from sucking, or as it is term'd generally, *Weaning* it from the breast.

Abscessus, ex *abscedo*, to depart ; a gathering of Matter in a Part : So named because hereby those which were before close joined, are forced upon a Separation ; the lower as it were retiring from the upper, to make room for the said Matter. See *Apostema*.

Absorbent, Medicines so denominated from their Power of imbibing the sharp Particles, and tempering the four Juices of the Blood deriv'd ex *absorbeo*, to swallow or drink up. See *Alkaline*.

Acetabulum, the Cavity or Hole in the *Coxendix*, or Hip-bone, receiving

TABULA ÆTIOLOGICA.

ing the Head of the Thigh by that Articulation (and indeed the principal Instance thereof) called *Enarthrosis*; which see also in its Place. It is called also of some, the *Cup*, and seems to derive its Name from its Likeness to an ancient Saucer, in which they brought Vinegar to the Table, thence named *Acetabulum*, ex *Aceto in eodem contento*; as our Salt-sellers, *Salina*, ex *Sale illa implendo*, See *Pyxis*.

Acromium, ex ἀκρῶ, *summus*, ὤμῳ, *humerus*; the upper Part or Top of the Shoulder.

Acute, a Disease that terminates suddenly, opposite to *chronic*, borrowed from *acuo*, to quicken or sharpen.

Adnascent, sticking or adhering close, ex *adnascor*, to grow to, or close upon.

Aduision, scorch'd as it were by violent Heat, or burnt, ex *aduro*, to burn or parch; figuratively here spoken of the *Bile* or *Choler*.

Egyptiacum, an Ointment so called, prepar'd of *Verdigrease*, *Honey*, and *Vinegar*, having its Name from *Egypt*, if we may credit the first Compilers of our *Dispensatory*.

Anchylops, a Disease of the Eye, or rather its inward Corner; in Greek ἀνίλωψ, ex ἀνίξ, *capere*, & ὤψ, *oculus*, or *Goats-Eye*; from its Likeness, or, as others, for that this Creature is prone to this Disease: Of which see more in *Anchylops*.

Aether, αἰθήρ, ἀπὸ τοῦ αἰὲ θάιν, à *semper currendo*, quòd *curfibus rapidis continuò rotetur*; vel, ab αἶθερ, *ardeo*, *splendeo*, to appear bright and resplendent; the Sky or Firmament: But meant with us of the *Cartesian*, Wonder-working Element, which enters and fills up the Pores of all Bodies whatever, and which he calls his *Globuli aetherei, seu primi generis elementa*.

Ætiology, ex αἰτία, *causa*, & λόγῳ, *ratio*; the Reason of a thing, or why it is so denominated.

Aggested, ex *aggero*, to pile up into one; any thing heap'd up; here meant particularly of certain Humours in the Parts.

Agglutinative, sticking or joining close, ex *agglutino*, to cement or glue together; imply'd of Wounds, whose Lips, by the Assistance of such Medicines, are so united.

Albuginea, the inner proper Coat of the *Testis*, or Stone, so termed from its white and transparant Colour.

Alexipharmic, ab ἀλέξω, *arceo*, & φάρμακον, *venenum*; a Counter-Poison of any kind, relating chiefly to Remedies in malignant Fevers.

Alexiterium, ab ἀλέξω & τρεῖς, *conseruo*, a Preservative from Contagion.

Alkali, derived originally from the *Egyptian Kali*; with us, but especially the *Chymists*, who make a filthy Clutter about the same, it stands for the fixed Salts of Plants drawn therefrom, first burnt to Ashes, then made into a *Lixivium*; but is now generally understood of all other Remedies, fitted by their Texture, to break, blunt, or sheath the *Spicula*, or Points of Acids.

Alimentary, any thing affording Nourishment to the Parts of our Bodies; ab *alimentum*, Food or Repast.

Alveolus, quasi *abovus parvus*, a little Trough, or other Hollow: Among Anatomists are implied hereby those by Nature form'd in the Jaw-Bones, to receive the Fangs of the Teeth, called otherwise their *Sockets*.

Amaurosis, ab ἀμαυρόω, *obscuro*; a Disease of the Eye, or rather the optick Nerve, called also *Gutta serena*; in which the Patient is quite dark, through some Matter in the Nerve, which intercepts the Rays

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passing to the *Sensory*, at the same time nothing being discoverable outwardly, unless upon strict Enquiry, when the *Pupilla* is found more dilated than the other, the *Uvea*, at least its Ligament, called *Ciliare*, having lost its Spring or Power of Contraction.

Ambustion, ex *amburo*, vel ex *ad* & *uro*, alias *am* & *uro*, & *b* interposito, fit *amburo*, a Burning or Scalding.

Analysis, ab ἀναλύω, *resolvo*, the reducing by *Chymistry* any Matter into its primary Constituent, or compounding Parts.

Analogy, ab ἀναλογίζομαι, *comparo*; a likening in general of one thing with another.

Anasarca, ex ἀνά, *per*, & σάρξ, *caro*; a watery Swelling, from a serous Humour shed between the Skin and Flesh.

Anatomy, ab ἀνά, *per*, & τέμνω, *feco*, vel ab ἀνατέμνω, *difsecō*; an artificial Dissection of Dead Bodies, for the Benefit of the Living, discovering thereby the Nature, Office, and Use of each Part, with the Diseases discovered upon them, not otherwise rightly to be found out.

Anchylops, ab ἀσχύλην, *hamus*, *strigura*, the same with *Ægylops*, according to some; though others, as *Blankard*, distinguisheth them thus, viz. that before the Swelling breaks, it is called *Anchylops*; and after, *Ægylops*; when, if the Bone of the Nose adjoining be concern'd, it makes the *Fistula lachrymalis*.

Anchylosis, ab ἀσχύλην, vel ἀσχυλόμαι, i.e. *Contractione Articulorum laboro*; signifying such Contraction and Stiffness of the Joints, as if there were no Articulation, at least intended for Motion of the same.

Ancyroides, a Process of the *Scapula*, so named ab ἀσχυρα, *anchora*, ῥύγχος, *rostrum*, & ἔδος, *forma*,

Aneurisma, ab ἀνέυρω, *dilato*; implying either a Rupture in the Coats of the Artery, whence the Blood is thrown out into the Interstices of the Muscles, or an Enlargement thereof by Dilatation.

Angina, ab angendis, seu *constringendis faucibus*, as some; or, as others, ab ἀσχεύω, *strangulare*; the *Quinsy*, a Disease of the Throat, or more properly an Inflammation of the Muscles of the Wind-Pipe, particularly those call'd *Arætenoides*, and *Thyreoarætenoides*; whose Office it is to straiten the Pipe, and by which thus distemper'd, the Air is at sometimes so entirely precluded, that unless Incision be made on the Outside, betwixt the Rings, to give a Passage thereunto, the Patient is presently strangled, as if a Ligature had been tied round his Neck.

Angiotomist, ab ἀγγείον, *vas*, & τέμνω, *feco*; a Person skill'd in the Course of the Blood-Vessels, or who can readily dissect them.

Anbelous, ex *anbelo*, to breathe with Difficulty; of which there are diverse kinds, as the *Asthma*, *Dyspnœa*, *Orthopnœa*; which you will find in their Places.

Anbelitus, idem quod *Anbelous*.

Anima Mundi, the *Soul of the World*; another universal *Ubiquitarian Principle*, suppos'd by *Plato* to do the same Feats as *Cartes's Ether*, pervading and influencing all Parts and Places.

Animalcule, a Dimin. ab *Animal*, or a living Creature so exceedingly minute or small, as to escape the naked Sight, and discoverable only by the help of Glasses. These are by some now-a-days, deem'd not only the Original of ourselves, but our Diseases also.

Anodyne, ex a *Particula Privativa*, & ὀδύνω, *doleo*, to be void of Pain: Hence all such Remedies as are in-

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intended to give Ease, or mitigate the same, are so denominated.

Antagonist, ex ἀντι, contra, & ἀγώνισω, oppono; one acting in Opposition, to another; in this Place referring to the Muscles, as where one lifts up the Part, and another depresseth or pulls down the same.

Anthrax, Gr. ἀνθραξ, i. e. carbo, a burning Coal; a Plague-Swelling, or Sore of that Name, from its burning Nature so call'd: The same with *Carbunculus*, which see.

Antidote, ἀντίδοτον, ex ἀντι, contra, & δίδωμι, do; any sort of Counter-Poison: The same with *Alexipharmic*.

Apparatus, from appareo, to appear, or be ready at hand; a Provision of all things necessary, or which may be wanting in the performing some Operation.

Appendix, ex appendo, to hang by, or any thing adjoining to another: Among the Surgeons the Elongation, or Bearing, at the End of a Bone. Se *Apophysis*, and *Epiphysis*.

Appendage: The same with *Appendix*.

Apbonia, ex α, part. priv & φωνή, vox; one who has lost his Voice, or is become speechless.

Aporism, ab ἀπορίζω, determino; a Principle or general Rule of some Art, taken as it were for granted, as founded upon Authority, such as those of *Hippocrates*.

Aponurosis, from ἀπὸ, de, & νεύρω, nervus; any nervous Expansion.

Apophysis, ex ἀποφύω produco; the Bearing out at the Extremity of a Bone, still continuous with the same. See *Epiphysis*.

Apoplexia, ab ἀποπλήγω, percutio; a sudden Deprivation, as well of Sense as Motion, Respiration sometimes, however, remaining.

Apostema, ex ἀρίσκημι, sejungo: The same with *Abcessus*.

Apophisegm, a Maxim, Axiom, or Proposition; a standing Rule.

Aq. Chal. Aqua Chalybiata, steel'd Water, or, in which hot Iron has been often quench'd.

Aq. Fabr. Aqua Fabrorum, the same; call'd otherwise the *Smith's Forge-Water*.

Arceus, the Author of the Unguent, ex Gum Elemi, called otherwise *Linimentum Arcei*, who wrote a Treatise of Wounds, in which he wonderfully (and deservedly too) extols the same.

Archæus, ab ἀρχή, principium; a sort of Primum Mobile, Semi, Deity, or Vice-God, set up, by Helmsont, to superintend the animal Fabric, or Oeconomy thereof, and to direct every thing in the best manner for Conservation thereof. Of kin to Plato's *Anima Mundi*.

Aretænoides, ab ἀρέτω, haurio, ἀνοίγω, aperto, & ἄστρο, forma; the Name of a Cartilage as well as of a Muscle of the *Aspera Artera*, or Wind-Pipe, serving, upon occasion, to constringe the same, and modulate the Voice.

Arteriotomy, ex ἀρτηρία, arteria, & τέμνω, secō; the artificial Opening of that Vessel, like what is practis'd in *Plebotomy*, or *Vena-section*.

Arthritica, ab ἀρθρον, articulus, sic dict. quod ad τὰ ἀρθρα, in articulos infuset morbus; Remedies for the Gout.

Arthrodiā, ab ἀρθρον, articulus, & δέχομαι, recipio; one of the Species of Articulation, or joining of the Bones under the *Diarthrosis*, or that for manifest Motion; which is, when a small flattish Head is receiv'd into a proportionate Cup or Cavity, as the *Humerus*, or Shoulder-bone, with the *Scapula*, or Shoulder-blade.

Astatio, roasting, ab asse, to roast at the Fire; here us'd of the bilious Juice metaphorically, as in *Adustion*.

Astiter,

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Ascites, ab ἀσκός, *uter*, a Dropsy of the Belly; so call'd for its being hereby distended, like unto a great Bottle.

Assimilate, ex *ad*, & *similis*, to be made like unto, or of the same Substance, or changed thereinto; as the Particles of the *chylous* Juice into Blood, and those of the nutritious into the Substance of those Parts, for whose Nourishment and Growth they are destin'd and appropriate.

Asthma, Gr. ἄσμα, ab ἄω, *spiro* Shortness of Breath: See *Anhelous*.

Astragalus, ἀστέγαλον, id. qd. *talus*, the first Bone of the Foot; called, in Men, the Ankle-Bone, in Brutes, the Pastern; and so named for its being used in antient Sports, or something of that Shape, called *Cockal*, in like manner with our Dice, going by the same Name.

Ataxy, ex *a*, part. priv. & τῶω, *ordino*, some particular Irregularity or Disorder.

Atheroma, ab ἀθήρα, *genus pultis*, sic dict. one of the *encysted Tumours*, termed so from its Pultis-like Contents: See *Steatoma*, and *Meliceris*.

Atmosphere, the whole Region of the Air round about us.

Athletic, ab ἀθλέω, *certo*, to contend in Wrestling; implying the same with a robust or strong Constitution; one fit for that Exercise.

Atlas, the first Vertebra of the Neck, ab ἀτλάω, *sustineo*, to support or uphold, the Head being hereon supported.

Attabilis, or a Degeneracy of the *Bile*, into what the Antients called *Black Choler*.

Atrophy, ex *a* priv. & τρέφω, *nutrio*, the Falling away of the Flesh, as in a Consumption, through an *Ataxy*, or other Defect supposed in the Nerves.

Autopsy, ex αὐτός, *ipse*, & ὄψις,

visus, an Eye-witness, or the Evidence of Sight.

B.

B *Asilicon*, ex ἁσιλίδω, *rego*, an Ointment bearing that Epithet, from its supposed Royal or Kingly Vertues.

Bilis atra; See *Atra bilis*.

Bregma, id. qd. *Sinciput*, the fore Part of the Head, ἀ βρέχω, *rigo*, *humecto*, the same being kept moist, or bedew'd by the Brain underneath: There are two of them, a Right and Left.

Bronchocele, a Swelling on the Wind-Pipe, or *Bronchus*; so denominated, ἀ βέγγχον, *bronchus*, & κήλη, *ramix*.

Bronchotomy ex βέγγχον, & τέμνω, *seco*, a Division made between the Rings of the Wind-Pipe, in the Operation so call'd, for the *Angina*, or *Quinsey*.

Bubo, a Swelling in the Glands of the Groin, taking its Name ex, βουβών, *Inguen*.

Buphthalmus, a distemper'd Eye, ex βύς, *bos*, & ὀφθαλμός, *oculus*, from its vast Largeness, call'd *Ox-eye*.

C.

C *Achexia*, ex καχός, *malus*, & ἔξις, *habitus*, an ill Habit of Body.

Cacochymia, ex καχός, *malus*, *pravus*, & χυμός, *succus*, the same arising from some deprav'd Juices in the Blood.

Cacoethic, an Ulcer so named, ex κακόν, *malum*, & ἥδον, *mos*, or of a stubborn Disposition.

Camarosis, ἀ καμάρεα, *testudo*, a Fracture of the Skull, like an Arch of a Vault, *fortassis* ἀ figura *testudinis antiquorum*; or from a Buckler held

over

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over the Head, to defend that Part from the Arrows of the Enemy.

Cancer, the most dreadful of all Diseases, from the knotty and livid Veins, like the Feet of a Crab surrounding its hard Body, so call'd; or as others, for that this Creature being of such like Complexion, and holding fast what it taketh within its Claws, so likewise this Tumour, of the same Aspect, bindeth in like manner the Parts it possesseth.

Capsula, a Dimin. from *capsa*, signifying a little Bag or Case; but in our Sense, one that is made up of the broken Membranes, formed by Nature, to enclose or lodge some extravasated Juice or other Matter contained in those Tumours we call *incysted*; the same with *Cystis*.

Carbunculus, ex *carbo*, the same with *Anthrax*, derived by some from a precious Stone of the same Name, of like Colour, viz. that of a Fire Coal.

Carcinoma, ex *καρκίνος*, *cancer*, & *νέμω*, *depasco*; the same with *Cancer*; unless that some will have the occult or hidden one go by this Name, others, that which is ulcerate.

Cardiaca, à *καρδία*, *cor*, any Remedy called Cordial, or which is intended to refresh the Spirits.

Cardialgia, ex *καρδία*, & *ἀλγέω*, *doleo*, Pain at the Stomach, or, by Consent therewith from the Nerves, call'd the Pain at the Heart; the same with *Cardiognos*, à *καρδία*, & *ὀδύω*, *deleo*.

Cariosity, à *caries*, signifying Rotteness in a Bone, like that of Wood, eaten into by a small Worm: See *Teredo*.

Carminative, Medicines to expel or discuss Flatulencies, or Wind, either in the Stomach or Intestines.

Carnify'd, (see *Incarnation*) turn'd into Flesh, ex *caro*, & *fit*.

Catagmatica, à *κατάγω*, *deduco*,

Remedies proper to cement the broken Extremities of a Bone, or to promote a *Callus*.

Catamenia, Gr. *καταμηνία*, ex *κατά*, *infra*, & *μήν*, *menstris*, the menstrual Purgation of Women.

Cataplasma, à *καταπλάσω*, *illino*, to spread like a Plaister, a Pultis-like Form of Medicine.

Cataracta, à *καταρράω*, *confundo*, a Disease of the Eye, stiled a *Cataract*, in which a Flim or Skin, growing before the *Pupilla*, like a Curtain drawn against a Hole, letting the Light into a Room, hinders the Passage of the same, till it is depressed by the Needle, as in *Couching*.

Cathartic, à *καθαίρω*, *purgo*, *muco*, a purging Medicine.

Catheretica, à *καθαίρω*, *de jicio*, to throw down; Remedies fitted to keep under and subdue a *fungus*, *spongy*, or, as it is call'd by the common People, *proud Flesh*.

Catheter, à *καθίμι*, *immitto*, an Instrument of that Name, used to be pass'd into the Bladder, for exploring the Stone, and to draw out the Water in an *Ischury*, or Stoppage thereof.

Cautica, ex *καίω*, *ura*, to burn; from their fiery and consuming Property, being the strongest of the three: See *Catheretic*, and *Septic*.

Cephalic, ex *κεφαλή*, *caput*, Remedies for the Head and Brain.

Cerebellum, quasi *cerebrum parvum*, that Part of the Brain, lying as an Appendage to the rest, on the backside of the Skull, call'd *Occiput*.

Chalybiatæ, any Remedy prepared with Steel.

Chlorosis, à *χλωρόω*, *viridis sum*, the Disease of Virgins, call'd the *Green Sickness*.

Cholagogue, à *χολή*, *bilis*, & *άγω*, *duco*, a Medicine to Purge *Choler*.

Chronic, à *χρόνός*, *tempus*, *Disorder*

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order of long standing, opposite to acute.

Chryſtalline, a Tumour on the *Præpuce*, white, ſhining and tranſparent, like unto Chryſtal; whence the Name.

Chyrurgery, ex χειρ, manus, & ἔργον, opus, in general any manual Operation; but with us particularly thoſe relating to that Art, or which are practis'd by the Surgeon's Hand.

Cicatrix, à cicatrico, to ſkin over, or heal up a Sore, the Scar left after ſuch Healing.

Cineritious, the outer Part of the Brain; called alſo the *cortical*, from its Colour like Aſhes, in Latin *cineres*.

Circocoele, ex κίρσος, varix, & κύλην, a varicous Swelling of the *Spermatic Veſſels*: See *Varix*, and *Varicocoele*.

Circumgyration, a Turning the Limb round about in its Socket, or Cavity, ex circum, ac gyro.

Circumrotation, the ſame Action, ex circumroto, to turn round about as a Wheel.

Coarſtate, à coarſto, to preſs cloſe or ſtreighten.

Clavicula, à clavis, a little Key; the Collar-Bone, from its Likeneſs in old Times thereunto

Clyſter, à κλύζω, abluo, from its Property of waſhing as it where the Inſide of the Guts, where, by way of Injection, it is thrown up.

Colliquation, a diſſolving or waſting of the Parts; ex colliquo, to melt away.

Collyrium, ex κολύω, inhibeo, & πῶς, fluxio, a Sort of Waſh for the Eye, ſo call'd from its Power of diverting the Rheum thence; vel ex colluo, to waſh, becauſe thereby theſe Parts are cleaned.

Coma, κῶμα, ſomnus profundus, a Diſeaſe attended with profound Sleep; but of which there are two

Sorts, diſtinguiſh'd by the Name of *Somnolentum*, ac *Vigil*: See *Sopor*.

Combution, ex con, & uro: The ſame with *Ambuſtion*.

Comminution, ex comminuo, to break or ſhiver to Pieces; meant here of the Bones ſo ſplinter'd by a Fracture.

Compages, ex compingo, to join together; a Frame of any ſort artiſtically put together; but with us, the animal Structure, in Whole or Part.

Concuſſion, ex concutio, to ſhake; a Jolt or Shock of the Brain, by Blows or Falls from on high.

Condiment, à condio, to ſeaſon, pickle, or powder; a Composition to preſerve dead Fleſh from Putrifaction: See *Embammata*.

Condylus, the flattiſh Proceſs or Head of the lower Jaw, entering the *Sinus* of the Os *Petroſum*, from its Likeneſs to the Knuckle, or Finger bent, (called by the ſame Name) ſo denominated.

Congeries, à congero, to gather into a Heap or Bundle.

Congeſtion, from the ſame; but with us importing a Swelling gradually riſing, and taking ſome time before it comes to ripen, in Contradiſtinction to that by Fluxion, and which quickly terminates.

Conglobate, ex conglobo, to gather ſingly into a round Ball; a Gland of that Name and Figure, to difference it from the following.

Conglomerate, ex conglomerato, to wind up in a Cluster; ſeveral ſmall Glands envelop'd in one common *Capsula*, or Cover, lying cloſe adjoining to each other.

Contagion, à contingendo, quia quem tetigerit polluit: The ſame with *Infection*.

Contaminate, ex contamino, to pollute or deſile.

Contraſſure, a Crack or Fiſſure in the Skull, in a Part oppoſite to that where

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where the Stroke or Blow was given :
See *Resonitus*.

Contusio, à *contundo*, to bruise.

Convulsion, à *convullo*, to pull or hale together : See *Spasmodic*.

Coracoides, a Process of the *Scapula*, so term'd ex *κόραξ*, *corvus*, & *εἶδος*, *forma*, from its Likeness to a Crow's Beak.

Cordialia : See *Cardiaca*.

Cortical, the outside of the Brain, the same with *Cineritious* ; called otherwise, its Bark or Cortex.

Craſis, à *καργνυμι*, *misceo*, the same with *mixture* ; the Temper of the Blood peculiar to every Constitution.

Cremaſter, à *κρεμάω*, *suspendo*, a Pair of Muscles so nam'd, from their suspending the Testicles and Spermatic Vessels in the *Scrotum*.

Cretaceous, of a Chalk-like Substance, from *creta*, signifying Chalk. such as is found in the Internodes of some gouty Persons.

Crisis, à *κρίνω*, *judico*, the Termination of a Disease, either by Death or Recovery.

Crotaphites, ex *κρόταφ*, *tempus*, si non à *κρίνω*, *pulso* ; the same with *Temporalis*, or the Temporal Muscle.

Cruor, Blood extravasate and congealed, à *κρύω*, *frigus*.

Cutaneous, ex *cutis*, belonging to the Skin, or Skin deep only.

Cuticula, a Dim. from *cutis*, the Scarfe Skin, from its Thinness so denominated, or the upper fine Covering of the *cutis*.

Cuneiforme, ex *cuneus* a Wedge ; there are three Bones of the *Tarsus*, which have this Name given them, from such Likeness.

Cylindrical, from the round, long, and slender Form, like that of a Cylinder ; a Term frequently bestowed upon the Tendons of some particular Muscles.

Cymbiforme, another of the Bones of the same Joint, from its Likeness to a Boat ; in Latin *cymba* : Also *Naviculare*, a little Ship or Boat.

Cystis : The same with *Capſula*.

D.

D *Artus*, Gr. *ἄρτος*, a *Neque*, *corium*, *pellis*, the second common Coat inclosing the *Testis* ; together with the outer Skin making up the Bag or Cod containing the same.

Decade, ex *δέκα*, *decem*, Ten, any thing composed exactly of that Number ; here imply'd of the Sections afore-going.

Deleterious, à *δολέω*, *noceo*, something poisonous or hurtful.

Deliquium, ex *delinquo*, to swoon, a Fainting away ; of kin to *Syncope*, and *Lypothymy*.

Delirium, ex *deliro*, to rave or talk idly ; or, as others, the Dreams of a Person awake ; one that is light-headed, in the common Phrase or Mode of speaking.

Deltoides, à figura Δ , & *εἶδος*, *forma*, one of the Muscles lifting up the Arm, from such Figure so denominated.

Derivation, a carrying or diverting the Course of the Humours from their present Tendency, by some Passages near adjoining, (see *Revolſion*) ex *derivo*, to derive.

Despumation, ex *despumo*, to scum away the Froth, to clarify ; with us it refers to the Blood, by some means thrown as it were into intestine Commotion, and after purify'd or cleans'd, by throwing forth what was offensive.

Desquamation, à *desquamo*, to scale Fish ; and by Metaphor applied to a foul Bone ; the outer or cortical part whereof riseth in like manner, and

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is thrown off like a Scale: See *Exfoliation*.

Deterfion, à *Detergo*, to wipe or scower; the cleansing away the Filth of a Wound or Ulcer, being the second *Gradus* or Step to healing, subsequent to that of their *Digestion*, or bringing to Matter.

Diagnostic, ex *δια*, per, & *γινώσκω*, *cognosco*, the Signs by which we know a Disease present: See *Prognostic*.

Diaphanous, à *διαφαίνω*, *pelluceo*, to shine through; any thing which is transparent.

Diaphoresis, ex *δια*, per, & *αἶρω*, *fero*, sensible Perspiration thro' the Pores: The same with Sweat.

Diaphoretica, idem, Medicines, promoting such Perspiration.

Diarrhœa, à *διαρρέω*, *perfluo*, to run through; a Looseness, or Flux of the Bowels.

Diary, à *die*, Gr. *ἡμερηίως*, a Day-Book or Journal, an Account taken daily of what occurs.

Diarthrosis, ex *δια*, per, & *ἄρθρον*, *articulus*; that Articulation of the Bones intended for manifest Motion, of which the three Subdivisions are, *Enarthrosis*, *Arthrodia*, and *Ginglymus*; to be found in their proper Places.

Diastole, ex *δια*, per & *έλλω*, *mitto*, the Dilatation of the Coats of an Artery, opposite to its *Systole*.

Diathefis, à *διατίθημι*, *dispono*; the Nature, Frame, or Disposition of the Body.

Digastrie, ex *δύς*, *bis*, & *γαστήρ*, *ventriculus*, double belly'd; one of the Muscles depressing or drawing down the lower Jaw.

Digestion, à *digero*, the same with *Concoction*, whether of the Food in the Stomach, before the same is changed into Blood; or of the Contents of some Aposteme, turning into Matter.

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Diploë, à *διπλόω*, *duplico*; the *Meditullium*, or Medullary Interstice between the two Tables (as they are call'd) of the Skull.

Discutientia, ex *discutio*, to dissipate or dissolve, Remedies suited to that Intention.

Disjunction, à *disjungo*, to sever or part what before was join'd close together.

Dislocation, à *disloco*, to put out of Place; meaning here particularly the Heads of the Bones, or those making up the Joints.

Diuretica, ex *δια*, per, & *ουρίνα*, & *ρέω*, *fluo*; Medicines that promote Urine.

Dura Mater, the outet Covering of the Brain, next under the *Cranium*; call'd otherwise *Crassa Meninx*, to distinguish it from the *Meninx tenuis*, or that immediately surrounding the Substance thereof: They are call'd *Meninges*, that is, *Matres*, from their being at least the imagin'd Source or Foundation of all other the nervous and membranous Expansions throughout the Body.

Dyscrasy, ex *δύς*, *difficile*, & *μίσγνυμι*, *misceo*, *tempero*; the evil Disposition of the Blood and its Juices.

Dysenteria, ex *δύς*, *έντερον*, *intestinum*, & *ρέω*, *fluo*, a Dysentery or bloody Flux, attended with Pain and Gripping of the Guts.

Dyspulatorica, ex *δύς*, *difficile*, *ἐπὶ*, *super*, & *ἑλθ*, *integer*, any Sore or Ulcer that is difficult of healing or skinning over.

Dyspnœa, ex *δύς*, & *πνέω*, *spiro*, a Difficulty of Breathing: Of which see *Anhelitus*.

E.

E *Chymosis*, ab *ἐκχύω*, *effundo*, & *αἷμα*, *sanguis*; any Extravasion of Blood upon the Parts, from Bruise

M m

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Bruise or otherwise making black and blue Marks upon the Skin : The same with *Sugillation*.

Ecpiesma, ab ἐκπίεζω, *experimo*; heretaken for a Fracture of the *Cranium*, where the Bone is beat in, and presseth on the *Dura Mater*.

Effervescence, ab *effervesco*, to boil up with Heat; with us a Commotion in the Blood, from somewhat foreign intermix'd therewith, and like a Ferment stirring up the same.

Effate, ab *ex* & *fatus*, signifying barren or childless; but figuratively taken for any thing that hath lost its Vertue, or is decayed.

Efflorescens, ab *effloresco*, to blow at it were, or appear in bloom, of Colour like a Flower; here taken for those Flushings or red Appearances sometimes suddenly thrown out of the Blood, of the like Complexion, on the Surface of the *Cutis*, either in distinct Spots, call'd a Rash or Marbling, also in the Measles, or universally, as in some Surfeits, and in the Scarlet Fever.

Elastic, ab ἐλαύνω, *agito*, *expando*, any thing springy, or capable of sudden Dilatation.

Elephantiasis, sic dict. quia corporis superficiem maculis & tumoribus similem faciat elephantis cuti, according to some; or, as others, ob morbi magnitudinem, the Leprosy, making the Skin look rough like that Creature: Others term it a Disease principally of the Feet, occasioning them to appear like those in the Elephant: Concerning which Distemper you may consult our Treatise de Morbis Cutaneis, Part I. Chap. 1.

Elevator, ab *elevator*, to be lifted or heaved up, several of the Muscles from that Office going by this Name, as the *Elevator Palpebrae*, *Humeri*, &c. but it is here meant of an Instrument used after Trepanning, to raise up the depress'd *Cranium*: It is

call'd otherwise *Lewator*, from *levo*, to-relieve, because hereby the Parts underneath oppress'd are freed from their Disturbance.

Eltroides, vel *Elytroides*, ab ἐλδοειν, *vagina*, & εἶδος, *forma*, the first of the proper Coats of the *Vesicis*, call'd *Vaganelis*, from inclosing the same, as in a *Vagina* or Sheath.

Embammata, ab ἐν, *in*, & βάπτω, *immergo*, any kind of Sauce or Pickle, like the Condiment before observ'd; taken here for those Gummy and Spicy Compositions, used for embalming dead Bodies.

Embrocation, ab ἐμβρίχω, *intingo*, any Liniment, Oil, or Ointment, with which the Parts are bathed.

Emetic, ab ἐμέω, *vomo*, Medicines to excite Vomiting.

Emmenagogue, ex ἐν, *in*, μῶν, *mensis*, & ἄγω, *duco*, such as are proper to promote the Monthly Visits of Women.

Emphysema, ab ἐμφυσω, *insflo*, a Swelling from Wind, called a flatulent Tumour.

Empyema, ab ἐν, *in*, πύον, *pus*, a Collection of Matter in the Cavity of the Breast.

Empiric, ab ἐμπειρέω, *sento*, one who alledges Experience only for his Practice, without being able to shew a Reason.

Emporium, ἐμπορεῖον, ἀπὸ τοῦ ἐμπορεύειν, *negotando*, a Mart-Town, where the Business of a Traffick is negotiated; metaphorically applied to the Brain, the great Place of rational as well as sensitive Transaction.

Emulsion, ex *emulceo*, to stroak or cherish, vel ab *emulgeo*, to milk out gently by the Hand, a common Remedy prepar'd of Almonds and Seeds with Barly-Water, of the Colour of Milk, to assuage Thirst, and demulce or mitigate the Heat, particularly of the Urine, occasion'd by Blisters, and in other Sharpness or Scalding thereof.

Emun-

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Emunctorium, ab *emungo*, to clean, or wipe away, to drain off, as by a Sink or common Sewer; figuratively with us applied to certain Glands, as the *Parotid*, which are call'd the Emunctories of the Brain; those in the Armpits and Groins to the Blood in general.

Enarthrosis, ex *ἐν*, *in*, & *ἄρθρον*, *articulus*, the first Species of the *Diarthrosis*, or Articulation of Bones, for manifest Motion, that is, where a large Head enters as large a Sinus, such is that of the *Femur* with the *Coxendix*.

Encanthus, ab *ἐν*, *in*, & *κανθός*, *bircus*, a spongy Excrecence in the inner Corner of the Eye: See *Anchylops*, and *Ægylops*.

Encephalus, ab *ἐν*, *in*, & *κεφαλή*, *caput*, the Brain in general, and all the Parts contained within the Skull.

Encysted, or *Incysted*, ex *ἐν*, *in*, & *κύστις*, *cista*, any thing cover'd up in a Case or Bag, meant particularly of those three Tumours, *Atheroma*, *Steatoma*, and *Melieris*; which see in their Order.

Endemic, ex *ἐν*, & *δῆμος*, *populus*, a Disease peculiar to some certain Region or Country.

Enema, ab *ἐνίημι*, *immitto*: The same with *Clyster*, or an Injection thrown in by the Fundament.

Ensiformis the Cartilage at the lower part of the *Sternum*, or Breast-Bone, lying over the Pit of the Stomach; so term'd from its Shape, like that of a broad Sword, and therefore nam'd also *Mucronata*, and *Xyboides*.

Enterocèle, ab *ἐντέρον*, *intestinum*, & *κήλη*, *ramix*, a Rupture of the *Peritonæum*, by which the Intestine or Gut, coming down by the Rings of the *Processus*, makes the *Hernia* call'd *Intestinalis*.

Enterociplocèle, ab *ἐντέρον*, *intestinum*, *ἐπιπλόον*, *omentum*, & *κήλη*,

the same Accident, when, together with the Gut, the *Omentum* or *Caul* is also slipp'd down therewith.

Epidemic, ex *ἐπὶ*, *super*, & *δῆμος*, *populus*, the same Disease universally raging at the same Time, in the same and other Countries.

Epididimis, ex *ἐπὶ* *super*, *δίδυμος*, *testiculus*, a Convolution of the *Spermatick* Vessels, before their Entrance into the *Testis*; the same with *Paristata*.

Epilepsia, ab *ἐπιλαμβάνω*, *invado*, a sudden and universal Convulsion of the whole Body, by the common People call'd the *Falling-Sickness*.

Epileptica, five *Anti epileptica*, Remedies for the same.

Epiplocèle, ex *ἐπιπλόον*, *omentum*, & *κήλη*, a Rupture, with the *Caul* only falling through the *Processus*, *Hernia Omentalis*.

Epiniētis, ex *ἐπὶ*, *super*, *νόξ*, *nox*, implying any Disorder arising in the Night, particularly meant here of a small Pustule in the Skin, inflaming suddenly: Of which see my Tract of those Diseases.

Epiphyfis, à *ἐπιφύω*, *accresco*, an Additament to the Head of a Bone, or an Elongation of the same, by one that is separable therefrom, or contiguous only, and therein differing from the *Apophysis*; altho' so closely adnected or joined, as to appear one continued Bone: See *Apophysis*.

Epiphora, ab *ἐπιφύω*, *infero*, i. e. *impetus humorum ab oculis*, an involuntary Flux of Tears: The same with *Rhyas*, according to some.

Epispastic, ab *ἐπισπᾶω*, *attracto*, a blistering Medicine.

Epistropheus, ex *ἐπιστρέφω*, *circumverto*; the same with *Cardo*, a Hinge, the second Vertebra of the Neck, so nam'd, for that the Head turns upon it, as a Door upon a Hinge.

Episthema, ex *ἐπὶ*, *super*, & *τίθμις*, *pono*, any local Remedy may

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be so denominated ; Physicians use it chiefly for Liquors, in which Rags being dipp'd, and express'd, are laid upon the Part.

Epulotica, ab ἐπυλῶ, *cicatricem infero*, Medicinies proper to cicatrize or skin over a Wound or Ulcer.

Erysipelas, ex ἐρυθρε, *ruber*, & πέλαις, *propè*, by reason of its reddish Colour ; from a Popish Saint it is called also, *St. Anthony's Fire*, or *Ignis sacer*, the holy Fire.

Errhine, ab ἐν in, & ῥίς, *nasus*, any Application intended for the Nostril.

Escharotica, ab ἐχάρω, *crasnam induco* ; implying the same as the *Cautic*.

Ethic, ab ἠθικός, *mos* ; the same with *Moral Philosophy*.

Eulogy, ex εὖ, *bene*, & λόγος, *sermo*, extolling or magnifying.

Euporiston, ex εὖ, *facilis*, & πορέω, *preparo*, a Medicine readily, or, as we say, prepared from the spot

Eufarchus, ex εὖ, *bene*, & σαρξ, *caro*, well flesh'd or Corpulent.

Euthanasia, ex εὖ, *bene*, *facilis*, & θάνατος, *mors*, an easy Death.

Exanthemata, ab ἐξανθίω, *effloresco*, any Eruption on the Skin, particularly here meant of the *Pusules* of the small Pox.

Excrementitious, ab externo, *egero*, any Humour thrown forth the Body as useless, such as Urine, Stool, &c. in Contradistinction to those that are *Nutritious*.

Excrescence, ab excresco, to grow or shoot up, a fleshy Substance arising upon any Part of the Body.

Excreta & retenta : See *Nonnaturalia*.

Exfoliation, the shelling off like a Leaf ; among the Surgeons implying the same with *Desquamation* ; or figuratively, a thin Scale like a Leaf, rising off from the sound Part of the Bone, as the Scale from Fish.

Exomphalos, ab ἔξ, *ex*, & ὀμφαλός, *umbilicus* ; *umbilici protuberantia*, a Rupture of the Navel.

Exostosis, ab ἔξ, *ex*, & ὄστέον, *os*, *extuberantia ossis*, a Swelling in the Bones so call'd.

Expansion, ab expando, to spread forth or display ; with us referring to the Animal Spirits, exerting themselves with the utmost Vigour, for the Relief of the Parts.

Expectoration, ab ex, & pectus, vel ab expectoro, to throw forth from the Breast, a raising of Phlegm, Blood or Matter from the Lungs, by coughing and hawking up of the same.

Extravasation, ab extra, & vasa, any Humour, but particularly Blood, thrown out of the Vessels, by some Rupture of the same, either outwardly or inwardly. and stagnising round about the Parts, in the Cavities.

F.

Fabric, ex fabrico, to build or frame any Building or Structure rais'd by Art ; but here figuratively intended of the human Body, most stupendiously form'd by the Wisdom of the Supreme Architect.

Falx, a Doubling of the *Dura Mater*, in the Form of a *Scythe* or *Sickle*, call'd by that Name, and dividing the Brain into the right and left Hemisphere.

Ferment, à servo : See *Effervesca*.

Fibrilla, a Diminutive, ex fibra, signifying a small and slender Thread, or Shoot from the Roots and Plants ; here taken for those of the Nerve, and fleshy Parts also.

Fibula, a Clasp or Button ; here understood of the small Bone on the outside of the Leg, so call'd, as they tell us, from joining the *Tibia* and *Muscles* together, as it were clasping them ; the Ancients us'd to bring the Lips of Wounds together by a Contrivance,

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trivance, unto which they gave this Name of *Fibula*.

Fistula, a Pipe or hollow 'Reed; but with us, from the Similitude, a hard and hollow Ulcer, running deep into the Flesh, or Cavities of the Body.

Flammula, I must confess myself at a Loss for the *Ætimon* hereof; in our Acceptation, either literally or figuratively, it is a Derivative from *Flamma*, denoting a little Flame or Blaze; and with the Surgeons implying a Skein of Silk, at least some part of one, perhaps of a Flame-Colour, and so taking this Appellative, pass'd through the Eye of a large Needle, which is then thrust through the Skin and Flesh, in order to drain off some Humours from a *Sinus* or Cavity not safe to be dilated, or cut open; which Operation is by the Surgeons named a *Seton*; the Farriers give it that of *Rowelling*.

Focile, signifies either of the two Bones below the Elbow of the Arm, and below the Knee in the Leg, with this Distinction of *majus* & *minus*, from their difference in Magnitude: And thus the *Ulna* is the greater *Focile* in the former, and the *Tibia* in the latter: But from whence rightly deriv'd, I must here also acknowledge I am at an Uncertainty, tho' I well know the Meaning as well of *focillo*, as *focillor*.

Fomentatio, ex *foveo*, to cherish, a hot Liqueur, apply'd with Flannels hard wrung, to the wounded or otherwise maim'd Parts.

Fomes, à *fovendo*, aliquid quo ignis fovetur, Wood or Chips, or any other combustible Matter to keep up a Fire or Flame; but with us it is taken figuratively, for the Matter which keeps up a Disease; the same with *Pabulum*.

Fontanel, quasi *parvus fons*, a little Fountain; metaphorically among

the Surgeons the same with *Issue*; as in like manner leisurely draining off the Humours in the Blood.

Fotus: The same with *Fomentation*.

Fracture, à *frango*, to break; among the Practisers in Surgery taken particularly for a Breach or Separation in the Bones, by some Force or Violence offer'd thereunto.

Fungus, in the common Acceptation, signifies a Mushroom or Toad-Stool, ex *funus* & *ago*, as bringing Death to the Eater; but here, by *Analogy* of Substance, any spongy Flesh, springing in like manner suddenly up, and of the like loose and spongy Nature.

Furunculus, ex *furo*, to rage, a little painful Swelling, inflaming the Parts, and gathering to Matter, called a *Coar*, by the common People, a *Bile*, or *Boil*.

G

G *Angrena*, à γάγρεθ, cancer, vel à γέλω, comedo, a beginning Mortification.

Gargarisma, à γαργαρίζω, os coluo, a Gargarism.

Gastrocnemius, à γαστήρ, venter, & κνήμη, tibia, the two Muscles call'd external and internal, making up that part we call the Calf of the Leg, swelling out like a Belly on the upper Part.

Gastrorhaphia, à γαστήρ, venter & ραφή, sutura, the stitching up of Wounds of the Belly.

Geometrical, ex γῆ, terra, & μετρέω, metior, of or belonging to Geometry, or the Art of Measuring.

Gingilavium, ex *gingiva*, the Gum, & *lavo*, to wash; any Lotion or Liquid Composition for the Diseases of these Parts, as when affected with the Scurvy or Putrifaction therein.

Ginglymus, à γιγλυμύμαι, pergingly-

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ginglymum jungo, the third Species of Articulation, usually reckon'd up by Anatomists under *Diarthrosis*, or that for manifest Motion, which is, when the same Bone receives and is again received.

Glandulæ Odiriferæ, so nam'd from their strong or rancid Smell, of which those under the *Præpuce*, or behind the *Glans Penis*, were so stil'd by Dr. *Tyson*; and to which we think the *Parotid*, or those seated behind the Ears, have as good Title.

Gomphosis, à γομφω, *clavum impingo*, the last of the Articulations, commonly accounted by the Writers of Anatomy, under *Synarthrosis*, or which is without Motion; the principal, if not the only Instance whereof, is the Teeth fasten'd in their *Alveoli*, or Sockets, as a Nail in Wood, whence the Name.

Graphical, à γράω, *depingo*, any thing that is exactly or accurately describ'd.

Grumus, a Lump of any thing congeal'd, ex *grumisco*; meant here of Blood under that State.

Gymnastica Medicina, à γυμνάζω, *exerceo*, a Way of curing Distempers by exercising the Body; the Place of strong Exercise, particularly Wrestling, being in Greek term'd γυμναστήριον.

Gypseous, from *gypsum*, Lime or Plaister, the Contents of some encysted Tumours having a near Resemblance thereto.

H.

Harmonia, belongs properly to the Agreement of Sounds in Music; as also due Proportion, call'd otherwise *Symetry* in Figures, with us it implies a strait or equal Line, or a Conjunction of the Bones by the same; being the second Way reckon'd under *Synarthrosis*, as the Bones

of the Nose: *Blancard* will have it so named, ab ἀῖω, *congruus*, *adapto*.

Hætic, Gr. ἐν ἡμέτῃ, *quod in habitu corporis consistat*, to distinguish from the *Phthisis*, or Consumption of the Lungs.

Hemicrania, ex ἡμι, *semis*, & κεφαλον, *calvarium*, a Head-ach on one side.

Hemiplegia, ex ἡμι, *semis*, & πλῆγω, *percutio*, a Palsy on one side.

Hæmoptoe, *hæmoptysis*, ex αἷμα, *sanguis*, & πύω, *spuo*, a Spitting of Blood.

Hæmorrhage, ex αἷμα, *sanguis*, & ῥήγνυμι, *rumpo*, any Flux of Blood from Wounds or other ways.

Hepatic, à ἥπαρ, *jetur*, the Liver, Medicines proper to open the Obstructions thereof.

Hernia, à duritis pellis instar lapidis, *quæ sit post intestinorum descensum*, à Sabinorum lingua, qui *Herniam*, *Saxum* vocant *παρὰ τὸ ἐπὶ*, *formarunt*, *quod cum intestinum incipit in scrotum decidere videtur Ramum facere*, unde & *Ramex* dicta, Gr. ἄλυσ, *ob similitudinem descendens rami*, ut *Hernia*, ab ἐρῶ, *ramus*, Rupture or Falling down of the Bowels into the Groin or Cod.

Herpes, ab ἑρῶ, *serpo*, a Tettar or Ring-worm.

Heterogeneous, à ἕτερος, *alter*, & γένος, *sexus*; with us several things of different Kinds mix'd together, as happens to the Fluid in our Vessels, we call Blood.

Homogeneous, ex ὁμοῦς, *similis*, & γένος, *sexus*, Things alike or of the same kind.

Horizontal, any thing upon a level Figure, as the extreme Circle of the *Horizon*, terminating our Sight, with the *Axis* of the Eye, ab ὁρίζω, *finiens*, vel *visus terminans*.

Horror

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Horror, ab *horreo*, to shake with Cold, common in the first Attack of all Fevers, but particularly the intermitting, call'd Agues.

Hydragogue, ab ὕδωρ, *aqua*, ἀγω, *duco*, Medicines to purge Water.

Hydrocele, ab ὕδωρ, & κήλη, a watry Rupture; the same with *Hernia Aquosa*.

Hydrocephalus, ex ὕδωρ, *aqua*, & κεφαλή, *caput*, a Dropsy of the Head, meaning the hairy Scalp.

Hyperfarcosis, ex ὑπέρ, *super*, & σάρξ, *caro*, spongy or proud Flesh.

Hypothesis, ex ὑπερτίθημι, *suppono*, something advanc'd upon Supposition.

Hypnotic, ex ὕπνῳ, *somnus*, Remedies that procure Sleep.

Hysteric, ab ὕστερα, *uterus*, such as are proper for the Womb and its Diseases.

I

Ichor, Gr. ἰχὼρ, a sharp, thin and bloody Humour, flowing from putrid Wounds and Ulcers; the same, with some, as *Sanies*.

Icterus, ἰκτερίῳ, idem quod *aurugo*, vel ab *ærugine*, the Jaundice, so term'd from its yellow Colour like that of Gold, or the Canker or Rust of Metal, such as that of gathering upon Copper or Brass, where the same have been long exposed to damp Places, or to the external Air.

Illuvies, ab *illuo*, vel ex *in*, & *lavo*, any Filth or Uncleannefs; here meant of that heap'd up in the Blood.

Incarnation, ex *incarno*, to fill up with Flesh: See *Carnified*.

Induration, ab *induro*, to harden, a Hardnefs in the Flesh.

Instrict, ab *instinguo*, to stir up or move; implying the natural Bent or Disposition of all Creatures, to pur-

sue or avoid what is good or hurtful to their several Beings; the same with *Archæus*, in the rational Species.

Intemperies, ex *in* & *tempero*, any Disorder or Indisposition of the Blood or Humours; the same with *Dyscrasy*.

Ischæma, ab ἰχῶω, *cohibeo*, & ἄμα, *sanguis*, Blood-Stanchers.

K

K Atamenia: See *Catamenia*.

L

L Abrisulcium, ex *labium*, & *fulcus*, a chap'd Lip; with us a swell'd upper Lip; having a Crack or Cleft in the Middle, being a sort of *Pathognomonic*, or Symptom of the Disease called the *King's-Evil*.

Lacunæ, any small Holes within another Cavity, but here understood of those in the *Vagina Uteri*, or Sheath of the Womb, from whose Pores issue forth the Humours in the *Fluor albus*; the same which, according to a late Writer, furnish also the Matter of the *Veneræal Gonorrhæa*.

Languor, ex *languo*, to grow faint, a Weaknefs or Sicknefs of the Spirits.

Larynx, the upper Part of the *Aspera Arteria*, or Wind-pipe, as *Pharynx* is of the Gullet.

Latex, any thin or watry Humour, with us the vapid, serous one of the Blood.

Lenticular, an Instrument used by Surgeons, to smoothe the rough Edge of the *Cranium*, it standing in need thereof, after the Use of the *Trepan*, to prevent the Membrane underneath from being thereby offended.

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Lentous, à *lento*, to make smooth, here meant of the slimy or ropy Juices in the Blood.

Levator, ex *levo*, to raise or lift up: See *Elevator*.

Leucophlegmatic, à *λευκός*, *albus*, & *φλέγμα*, *pituita*, a Constitution abounding with crude, phlegmatic Humours, as in the Disease, called *Febris alba Virginum*, by the common People the *Green-Sickness*.

Lienteria, ex *λειότης*, *lævitas*, & *έντερον*, *intestinum*, a Flux of the Bowels, when, thro' their Slipperiness, the Aliments pass out undigested, or little altered from what they were, when taken into the Stomach.

Limbus, Gr. *λοβός*, a Hem or Border round a Garment; here taken for the outside Compass of the Brain.

Leipothymy, ex *λείπω*, *deficio*, & *θυμός*, *animus*; the same with *De-siquium*, and *Languor*.

Litbotomy, *λίθο*, *lapis*, & *τέμνω*, *feco incido*, the Operation of cutting for the Stone.

Lippitudo, i. e. *λήμν*, *ὀφθαλμία*, vel *ξηροφθαλμία*, a Blearedness of the Eye.

Lixivium, a Lee made with Ashes.

Lochia, à *λέχομαι*, *cubo*; here taken for the Purgations issuing from the Womb, the first Days of a Woman's Lying-in, or after Child-Birth.

Ludicrous, ex *ludo*, to play, or wanton; with us refer'd to *Nature's* sporting as it were in some of her Productions.

Lumbago, ex *lumbus*, & *ago*, a Pain in the Back or Loins, as happens before the Eruption of the Small Pox; also after hard Labour, Blows and Falls on those Parts.

Lupia, a small Tumour of the incysted Kind, like the *Ganglion*.

Lusus Naturæ, the same with *Aberratio*; also *Ludicrous*.

Luxuriant, à *luxurio*, to exceed, or over-abound; among Artists importing the same with *Hyper-sarcosis*, and fungous Flesh.

M

M *Acrocosm*, ex *μακρός*, *magnus*, & *κόσμος*, *mundus*, the Great World, in Contradistinction to Man, metaphorically the Little one.

Magma, ex *μάσσω*, *exprimo*, the Fæces or Remains of a Decoction after the Liquor is press'd forth.

Malleolus, a Dimin. ex *malleus*, ob similitudinem *mallei*, the lower protuberating Parts of the *Tibia* and *Fibula*, constituting the outer and inner Ancles.

Mamilla, quasi *parva mamma*, vel *mala parvula*, the Nipple of a Woman's Breast.

Mandibulum, ex *mando*, to chew, the Jaw-Bones, whether upper or lower.

Marasmus, à *μαρσίνω*, *marcesco*, to waste or pine, a Consumption of the whole Body.

Mathematici, idem quod *mathematicus*, à *μαθηάω*, *disco*, vel *μάθησις*, *disciplina*, one skill'd in Mathematics, as Geometry, Astronomy, &c.

Matrices, the Places in which Insects are hatch'd and nourish'd, as the *Fetus* in the *Matrix* or Womb of a Woman.

Maturation, à *matureo*, to ripen or bring to Perfection; with us the Gathering of an Abscess or Apopleme.

Mechanism, *μηχανική τέχνη*, *ars mechanalis*, à *μηχανή*, *machina*, of or belonging to Mechanics or Handicrafts.

Medi-

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Meditullium quasi *meditullium*, ex *medium* & *tellus*, the middle of the Earth, call'd by Navigators the *Mediterranean*, and is applied to the very midst of any thing else; particularly by Anatomists, the Interstice or middle Space between the two Tables of the Skull is so denominated: See *Diploë*.

Medulla oblongata, a Part of the Brain so called from its Figure, the Beginning or Source of the spiral Marrow, whence the Nerves arise within the Skull, before it descends through the great *Foramen* in the *Occiput*.

Medulla panis, the inner or crummy part of a Loaf, used by the Surgeons for thickening of *Cataplasms* or making of *Pultifles*.

Melanagoga, ex *μέλας*, *niger*, *ater*, & *ἄγω*, *duco*; Medicines that purge *Melancholy*.

Meliceris, ex *μέλι*, *mel*, & *κρείον*, *favus*; one of the encysted Tumours, from its Contents like Honey, so denominated.

Meninx, idem quod *Mater*: See *Dura Mater*.

Mesenterium, ex *μέσον*, *medium*, & *ἐντέρον*, *intestinum*, the Membrane sustaining and collecting the Guts together in the *Abdomen*.

Metastasis, ex *μετίσθημι*, *transfatus*; among Physicians denoting a Translation or Shifting of a Disease, at least the Matter thereof, from one Part to another.

Metrencbita, ex *μήτρα*, *matrix*, & *κῶα*, *fundo*, a Womb Syringe.

Metraproptoticon, ex *μήτρα*, *matrix*, *uterus*, & *πρόπρωσις*, *prolapsus*, a Plaster or other Remedy for the Falling of the Womb.

Microcosm, ex *μικρός*, *parvus*, & *κόσμος*, *mundus*; the little World, Man, so called: See *Macrocosmus*.

Myoiomist, ex *μῦς*, *musculus*, & *τέμνω*, *feco*; one well vers'd, as we

say, in muscular Dissection.

Mitbridate, a vulgar Composition of the Shops, taking its Name from its Inventor, *Mitbridates*; through in our *Dispensatories* going under that of *Democrites*.

Mucronata, ex *mucro*, the Tip, the lower Extreme or cartilaginous Point of the *Sternum*, or Breast-bone, lying over the Stomach.

Mundificantia, ex *mundifico*, to cleanse; Medicines proper to cleanse Wounds or Ulcers; The same with *Detergents*.

Myocephalus, ex *μῦς*, *musca*, & *κεφαλή*, *caput*, a Disease of the Eye, in which, by a Rupture of the *Cornea*, the chrySTALLINE Humour hangs out of the Perforation, resembling the Head of a Fly.

N

N *Arcotica*, à *ναρκεῖν*, *stuporem induco*, Remedies that take away Pain by blunting the Sensation.

Nasalia, are small oblong Bodies put up into the *Vagina* of Virgins, in like manner as the *Pessaria* into those of married Women.

Natta, a Tumour growing out on the Back, at sometimes of large Dimensions reckon'd amongst the encysted, and called Wens.

Naviculare; the same with *Cymbiforme*.

Necrosis, à *νεκρῶς*, *morte afficio*, a perfect Mortification.

Neurotica, à *νεῦρον*, *nervus*, Remedies for the Diseases of those Parts.

Nonnaturalia, ita vocantur quia non in corpore secundum naturam, sicut facultas, nec præter, sicut morbi, sed inter utrumq; nam cibus medicriter sumptus corpus nutrit, aliter offendit, & sic de cæteris; the *Nonnaturalis*, which are reckon'd fix, viz. the

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the Air, Meat and Drink, Sleep and Waking, Motion and Rest, Things evacuated, call'd *Excreta*, Things retain'd, call'd *Retenta*, and *Passions* of the Mind; on the due and regular ordering of which great stress is laid, as to the healthful or sickly State of our Bodies, and by which the Sick and Wounded are much affected.

O

OEdema, ab οἰδέω, *inflatus sum, tumeo*, the third of the four general Tumours, arising from *Pblegm*.

Omoplate, by some, *Homoplate*, ab ομοϑ, *umerus*, & πλατύς; *latus*; the same with *Scapula*, or the Shoulder-blade.

Opaquo, ab opaco, to shade from the light; any thing of an obscure or darkish Colour.

Ophthalmia, ex οφθαλμίδε, *oculus*, an Inflammation on the outer Coat of the Eye, called *Adnata*.

Orgasmus, ex οργαζω, *impetum facio*, an Outrage of the Spirits.

Orthopnea, ex ορθή, *recta*, & πνοή, *spiratio*. that Species of *Anhelitus*, or difficult Respiration, in which the Sick cannot draw his Breath, unless sitting upright: See *Anhelous*.

Oscillation, ab oscillo, to swing up and down like a See-saw upon a Rope, or Board laid cross a Plank; in our Sense applied to the *tonic* Motion of the Fibres, like to that of the *peristaltic* one of the Guts.

Osteocolla, οστέον, os, & κόλλα, *gluten*, a kind of Fossil, taken from under ground in some Parts of Germany, endowed, at least supposed, with great Vertue in forwarding the *Callus*, or Cement for broken Bones.

Ostenology, ex οστέον, os, λόγος,

formo, vel λέγω, *duco*; a Discourse of the Bones in general.

Ovarium, the Ovary, or Egg-bag in Fowls; in Women the *Testis*, from its suppos'd *Analogy* therewith, in this last Age so termed.

Oxycratum, ab ὄξος, *actum*, & κρηγνυμι, *misceo*, a Mixture of Vinegar with Water.

Oxordetica, ob ὄξος, *acutè*, δεικνύω; *video*; Remedies to strengthen or quicken the Sight.

Oxyrhodinum, ob ὄξος, *acutè*, & ῥόδον, *rosa*, an antient Form of Remedy prepared of Rose-Leaves and Vinegar, which in Head-Achs was wont to be laid on the Forehead.

Ozæna, ab ὄζω, *alsacio*, a stinking Ulcer of the Nostril so termed.

P

PAbulum, à πᾶν, *nutrio*; Forage or Sustenance; also a Fewel for the Fire, or Oil for a Lamp; the same with *Fomes*.

Pampiniforme, ex pampinus & forma; the spermatick Vessels in their descent to the *Testes*, from their divaricating like the Tendrils or Twigs of the Vine, so named by Anatomists; the same with *Varicosum Corpus*.

Pancreas, ex πᾶν, *totum*, & κρέας, *caro*; that Part in Animals called the *Sweet-bread*.

Panus, quasi *Panis*, a Swelling with Inflammation rising under the Chins of Infants and young Children, appearing like a little Loaf, and usually turning to Matter; the same, according to *Celsus*, with οὔρεθλον.

Paracentesis, ex παρακενῆω, *compungo*; the Operation of tapping for the Dropsy, call'd *Ascites*.

Paradox, ex παρὰ, *præter*, & δόξα, *opinio*, somewhat advanced, appearing

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appearing strange, or contrary to the common Opinion, however prov'd to be true.

Paralysis, ex παραλύν, *resolvo*; the Palsy.

Paraphrenesis, ex παρα, de, & φρεν, *mens*, i. e. *mentis affectio*; a Frensy, or *Delirium*, arising, according to the ancient Opinion, from an Inflammation of the *Diaphragm*, or *Midriff*, to which they were wont to give the Name of φρεν, or *mens*, from its great Consent, as they suppos'd, with the Brain.

Paraplegia, vel *Parplegia*, ex παρ, i. e. *aqualis*, & πλάσιω, *percutio*; a Palsy of both Sides, or of all Parts below the Head.

Paregoric, ex παρηγορέω, *lenio*, *mitigo*; Remedies to assuage Pain, whether by inducing Rest, or otherwise soothing the Spirits, and, according to *Helmout*, delighting the *Archæus*.

Parenchimatous, à παρασχύν, *infundo*, vel, ex παρα, χυμός, *succus*; the Substance of the *Liver*, *Spleen* and *Lungs*; and in general to be understood of the loose and juicy Stuffing, giving Bulk to some others, and filling their vesiculous Parts.

Parietal, quasi *pares*, for that there are two of them; the Bones of the *Sinciput*, like Walls, in Latin *paries*, defending and encompassing the upper Part of the Brain: The same with *Bregma*.

Paronichia, ex παρα, *juxta*, & ονυξ, *unguis*, a painful Swelling about the Nails, call'd by our People a *Whitlow*, or a *Whitflaw*, and the worst sort a *Felon*; of which see our Treatise *de Morbis Cutantis*.

Paratides, ex παρα, *pone*, & τίς, *auris*; a swelling behind the Ears, or of those Glands we have before stil'd *Otorifera*.

Paroxysmus, ab παροξύω, *exacerbo*; the Time of a Fever-fit, or its

Exacerbation, when the Heat, Restlessness, and other Symptoms, are most raging.

Pathognomonic, ex πάθος, *passio*, & γινώσκω, *cognosco*; some peculiar Symptom always attending upon the same Disease, and by which such Distemper is known to the Physician from others of near Resemblance; as the dry Cough and hard Pulse, with Pain in the Side, in the *Pleurisy*.

Pedunculus, quasi *pes parvus*, the Stalk or Steal of a Plant; but here meant of the small Roots or Bases of some wenny Tumour, or other Excrescences sprouting forth several Parts of the Body.

Percolation, ab percolo, to strain through a Sieve, by strained Liquor of a Decoction or Infusion, but here applied to certain Juices secern'd, and as it were strain'd through the Pores of the Glands.

Pericranium, ex περί, *circum*, & κρανίον, *caput*; the Membrane immediately investing the outside of the Skull.

Periosteum, ex περί, & ὀστέον, *os*, that which clothes all the other Bones of the Skeleton.

Periphery, ex περί, & κύκλος, *circumfero*; the outside Line of a Circle, or the Circumference of any Body.

Periphomosis, ex περί, & φίμα, *obtumentum*; a Swelling of the *Præpuce* and *Glans*, by the former being forced behind the Neck of the latter, there as it were strangling of the same.

Peripneumony, ex περί, *circum*, & πνεύμων, *pulmo*; an Inflammation of the Lungs.

Peristaltic, ex περιεστέλλω, *contraho*, *arcto*; the constant and incessant Motion of the Guts.

Pernio, ab perna *calcantum*, ut Gr. χειμῶλον, ex χεῖμα, *hyems*, a Kibo or Chil-blain.

Pessæ.

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Pessarium, idem quod *Pessus*, a Form of a Remedy prepared of Gums and other Materials, of an oblong Figure, to be introduc'd by the Pudenda of Women, for the Relief of the Womb, as its bearing down: See *Nascatium*.

Pestilential, à peste, some highly malignant and contagious Fever, of kin to the Plague.

Phagadæna, à φαίω, edo, & δάκνω, redo, vel ἀπὸ τῆ φαγεῖν, ab edendo; a stubborn, corrosive, or eating Ulcer.

Pbalangus, a military Term, borrow'd from Soldiers plac'd in array of Battle, a four square Army being call'd *Pbalanx*; here referring to the Bones of the *Carpus*, placed in like Rank or Order.

Phantome, à φαίω, appaero, an imagin'd Apparition in Sleep, or some whimsical Fancy of a Person as it were dreaming.

Phænomenon, ex φαίνομαι, appaero, taken usually for some Appearance in the Air; but with us for somewhat carrying a resemblance to, or shew of Truth, by way of Inference or Deduction, intended to countenance some Proposition, or for the Support of an *Hypothesis*.

Phimosis, ex φίμω, obturamentum; the Contraction of the *Præpuce* at the end of the *Glans*, as the *Periphimosis* over its Neck.

Phlegmagogue, ex φλέγμα, pituita, & ἄγω, duco; Medicines to purge off the phlegmatic Humours of the Blood.

Phlebotomy, ex φλέψ, vena, & τέμνω, fisco, the same with *Venæsection*, or opening a Vein with a Lancet.

Phlegmon, à φλέω, inflammo, uro, any Inflammation; but particularly meant of the first of the four common Tumours, reckon'd by the antient Writers.

Phlegmonoides, ex φλέγμα, phlegmon, five inflammatio, & ἴδιον, forma.

Phrenitis, phrenesis, à φρεν, mens, i. e. mentis alienatio; a Phrensy, or Madness: See *Paraphrenesis*.

Phthisis, à φθίω, corrompo, taken usually by Physicians for a Consumption of the Lungs, called a *Pulmonary Phthisis*.

Phygethlon: See *Pannus*.

Phyma, à φύω, cresco, vel φούω, nascor; a Swelling or large Boil, or in general any Apostem; but particularly applied to those glandulous Tumours of the Jaws of Infants and young Children, frequently inflaming and turning to Matter; also a Swelling near the Fundament going by the same Name. *Celsus* calls it by that of *Tuber*, from its Likeness to Puff springing out of the Ground. *Blancard* gives this Name of *Phyma* to the *Verrucæ Manus*, and *Calli*, *Pedum*, as also to other cutaneous Excrescences.

Physic, à φύσις, natura, implying in general any Part of natural Philosophy, but here particularly restrain'd to Medicine.

Pia Mater, seu *Meninx tenuis*, the Membrane immediately investing the Substance of the Brain: See *Dura Mater*.

Pituitous, ex pituita, Phlegm, of such Habit or Constitution.

Pletbora, à πλήττω, impleo, implies a Fulness of the Blood-Vessels, a full Habit of Body, call'd otherwise *pletboric*.

Pleuritic, à πλερεῖς, latus, an Inflammation of the *Pleura*, or Membrane covering the Ribs; a *Pleurisy*.

Pneumatocèle, à πνεῦμα, ventus, & κήλη, ramix; a windy Rupture; called otherwise *Hernia Venosa*.

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Polypus, ex πολὺς, *multus*, & πῦς, *pes*, a Hog Louse, or Sow Bug, from its great Number of Feet called also *Millepedes*: likewise a Fish bearing that Name, and with us a spongy Tumour in the upper Part of the Nostril; *quod polypi marini sit similis*, nam ἡ carne eum refert, ἡ multas habet radices, uti piscis ille pedes, says *Vossius*.

Posca, the same with *Oxycratum*.

Præcordia, ex præ & cor; the vital Parts in general, or those about the Heart, the Region of the Breast.

Prædominion, ex præ, & domino, the Mastership or Government.

Præponderate, ex præpondero, to outweigh or bear down the Scale; any thing exceeding in Weight or Gravity.

Præputium, à præputando, *prescin-do*, the *Præpuce* or Fore-skin, so called for that the same was cut off by the Jewish Rites, or according to the Law of *Moses*, in the *Old Testament*.

Procatartic, à προκατάγω, *antegredior*, an antecedent or fore-leading Cause to the Disease.

Procedentia, à procido, to fall down, a Bearing down of the Womb or Fundament.

Prognostic, à προγνώσκω, *præcognosco*, a Fore-telling of the Issue or Event of a Disease, founded upon a right Knowledge of its Nature, and common or customary way of its Termination.

Prophylactic, à προφυλάσσω, *præfero*, any Remedy taken by way of Prevention, or as preservatory against a Disease.

Prolapsus, à prolabor, to slip down; the same with *Procidencia*.

Pronation, is when the Arm is so inclin'd, as that the Palm of the Hand is turn'd inwards and down-

wards; as *Supination* is when the same is placed upwards, with the Back of the Hand downwards, by means of the Muscles subservient to those Motions.

Prothesis, à προσίθηναι, *appono*, a Part of Surgery, or Mechanics rather, teaching to supply some Defects of the Limbs; as in the artificial *Arm*, *Leg*, *Eye*, *Nose*, &c.

Prothetic, the same with *Prothesis*.

Propathic, ex προπάθος, *primus*, & πάσχω, *pator*, the Part primarily or first affected, to difference it from that suffering by *Sympathy*, or *Consent* with some other.

Psalismus, à ψάλλω, *psuo*; the same with *Salvation*.

Ptisana, à πτίσσω, *decortico*, a Liquor of the Ancients, called *Ptisane*, given for to allay Thirst in Fevers, from the Barley, thereing unhusk'd and boil'd, so denominated.

Pyxis, Gr. πυξίς, à πυξίς, the *Box-Tree*, from whence usually they were made, a Box or Cup, here applied to the Hollow in the Hip-Bone, receiving the Head of the *Oss Femoris*, or Thigh Bone, as into a Cup or Box.

Pubescency, à pubesco, to grow up; the Age of Youth, or Puberty.

Pulsation, à pulso, to knock or thump, the Stroke of an Artery, call'd the *Pulse*.

Pultricular, of a Pultice-like Consistence.

Pusillanimity, ex pusillus, & animus, Cowardice, one that is faint-hearted.

Q

Quinsy: See Angina.

1.

Ranu-

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R

R *Anula*, quasi *rana parva*; a Tumour under the Tongue; so nam'd, either from some fancy'd Resemblance thereto, in its Shape or Figure, or for that it makes the Patient imitate, in his Voice, the croaking hoarse Noise of the Frog.

Raphe, the same in Greek as *Sutura* in the Latin; implying, in the Sense of Anatomists, the first Species of Articulation of the Bones, particularly the *Cranium*, under *Synarthrosis*, or without Motion, called Suture or Indenture: See *Sutura*.

Regimen, ab *rego*, in a physical Sense importing the due ordering or government of sick People.

Repullulate, ex *repullulo*, to bud afresh; here taken for the Flesh in Ulcers, sprouting as it were up a-new.

Repulsion, ex *repello*, to drive back, a repelling of a Humour flowing to the Parts, by the means of stiptic or restraining Medicines.

Reserate, ex *reseo*, to unstop; an opening of the small Tubes or Pipes of the Body, obstructed by Humours therein, as it were stagnant and lock'd up.

Resolutive, ex *resolvo*, to unloose; Remedies intended to breathe forth the Humours impacted in the Skin or Flesh.

Resonitus, ex *resono*, to resound; an Echo or Sound in the Air, drove back, as in some Places, whence it came; among Surgeons it is taken for a Fracture or Fissure in the *Cranium*, in some Part directly opposite to that which is struck, being the same with the *Contrafissure*.

Restrictive, ex *restringo*, to bind hard; a Medicine intended to lock up the Pores and Passages of the Vessels, and thereby inhibit the shed-

ding forth of their Contents; of kin to the *Repulsive*, and directly contrary to the *Resolutive* and *Respirating*.

Retenta & excreta, one of the first *Nonnaturals*: See *Nonnaturalia*.

Revulsive, à *revello*, to call off as it were, and pull back, to draw off a Humour by a way quite contrary or opposite; and thus a Blister in the Neck makes *Revulsion* in an Inflammation on the Eyes or Forepart of the Head, as also from the Breast; bleeding in the Feet, revells also from the upper Parts or those above. See *Derivation*.

Rhyas, Gr. ῥυάς, à ῥέω, *fluo*, *oculorum fluxio*; See *Epiphora*.

Rigor, à *rigeo*, to grow stiff with Cold; among Physicians denoting a sudden Shiver, or Shock of the whole nervous System, frequently recurring, a universal Spasm, a Symptom of the worst kind, frequent upon *Amputations*, *Fractures* attended with *Grangrene* and *Mortification*, and some kinds of Fevers.

Rima, a Rift or Cleft in Wood; with the Surgeons a Fissure, or Chink-like Division of the Bones of the Skull, happening by Blows or Falls.

Rimula, quasi *parva rima*; Anatomists give this Name to the cartilaginous Rings of the Wind-pipe, whose Interspaces are fill'd up by its Coats or membranous Expansions, fastening them at equal distance from each other, quite through the Pulmonary Lobules.

Rythm, ab ῥυθμίζω, *ad numeros aptos refero*, vel ab ῥυθμός, a Term in Musick and Poetry, relating to exact Numbers, or due Harmony; with Physicians taken for the Distance of Time between the *Systole* and *Diastole* of the Artery, or the Interspace between the Vibration of its Coats.

Rufus

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Rupture, ab *rumpo*, to break; distinguished by the Practitioners of Surgery, from the *Fracture*, in that the latter relates to a Breach in the harder Parts of the Body, the *Bones*; the former to a Rent in the softer; but particularly now understood of that made in the *Peritonæum*, or Rim of the Belly, letting through the Bowels into the Groin or Cod: Or, as by the Word *Fracture* is imply'd, a Solution by *Breaking*, in the *Rupture* there is also a *Rending* or *Tearing*: Or, in other Words, as *frango* signifies to *break*, so *rumpo* to *rend* or *tear in sunder*.

S

Saburra, à *sabulo*; a Load of Sand, Gravel, or Rubbish, with which they Ballast Ships; by a Figure taken, among Physicians, for a Heap of filthy Humours congested in the Stomach, and *prima viâ*, of some morbid or diseas'd Bodies.

Sagittalis: See *Sutura*.

Sarcocèle, ex *σάρξ*, *caro*, & *κῆλη*, *ramex*, a fleshy Rupture, called by the Surgeons *Hernia Carnosa*.

Sarcoma, idem; any fleshy Excrescence, or Tumour of a fleshy Substance.

Sarcotic, ex *σαρξίω*, *incarno*; Medicines that fill up the Hollow of Wounds and Ulcers with new Flesh; the same with *Incarnation*.

Scabies, à *scabo*, to scratch; the *Scab* or *Itch*: *Pruritus*, à *prurio*, denoting the same Distemper.

Scalprum, à *scalpro*, to raspe or rase; an Instrument with which the Surgeons scrape off the Rottenness of the Bones, called *Rugining*.

Scirrhus, à *σκληρόω*, *induro*; the last of the four general Tumours; from its Hardness borrowing that Epithet.

Schrophula, vel *Scrofula*, Gr. *χολέσδε*, idem quod *Struma*; according to *Celsus*, à *suibus*, sic dict. qui peculiariter hoc morbo infestantur, unde ut *porcellus* à *porcus*, sic *scrofula* à *scrofa*. Whether so, or not, 'tis certain the Word *Scrofula* stands, in our common *Lexicon*, for a little Pig; but with us is meant a Disease of the Glands, going under the Name of the *King's-Evil*.

Scrobiculum Cordis, the Pit of the Stomach, called of some the *Heart-Pit*; the Word *Scrobiculum* standing for a little Pit or Furrow.

Scutiforme, ex *scutum*, & *forme*, signifying an Application Plasterwise to the Stomach, in the Figure of a Shield or Target worn by the Antients, to defend the Heart from the Arrows or Darts of the Enemy.

Secerned, à *secerno*, to separate one thing from another; imply'd here of the Liquor or Juice separated by the Glands: The same with *Secreted*.

Seder, a Seat or Point, the Spot in the Dice; with the Surgeons taken for the same thing in the Bone, as the Puncture in the Flesh: An Impression in the Skull particularly, occasioned by the Point of a sharp Instrument struck forcibly thereinto.

Septic, à *σῆνω*, *putrefacio*; Medicines to waste proud Flesh, of a middle Nature between the *Cathartic* and *Cautic*.

Seton, a sort of double *Fontanel*, kept open by drawing a *Flammula* through the Skin, at about an Inch Distance each Orifice from the other; made for the most part, or of choice, in the Neck, to discharge certain Humours offending the Head or Eyes, or for Relief of the Breast, as in *Asthma's*, and stubborn *Catarrhs*; likewise of necessity in other

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ther Parts, to give vent to some Matter that lies too deep for cutting open the Cavity, and cannot otherwise be emptied: See *Flammula*.

Singultus, à *singulto*, to sob; a Convulsion of the *Oesophagus*. according to some; or, as others, of the upper Orifice, call'd the Mouth of the Stomach; the *Hiccup*.

Sipbilis, idem quod *Morbus Gallicus*, five *Lues Venerea*.

Sopor, à *sopio*, Gr. καὶ μῆσις, κῶμα, the same with *Coma Somnolentum*, a profound Sleep, with Snoring, as in a Lethargy, being a common Attendant upon Fractures of the Skull, with Concussion of the Brain, and great Extravasation of Blood upon the same.

Sordes, à *sordeo*, vel *fordesco*; any Filth or Nastiness, through sluttish Neglect gathered together; but with the Surgeons, implying the putrid Filth lying undigested in some Wounds and rotten Ulcers, being thick, and sticking fast therein.

Spasmodic, à *σπᾶω*, *contraho*, a convulsive Twitch, or Vellication of the Nerves, any cramp-like Disorder thereof.

Specific, ex *Specifico*, Gr. ἐξοποιῶ, ex *species*, & *facio*, a Medicine peculiarly suited by some intrinsic Property, or Way of acting less known to us, to subdue a Disease, though now the Subterfuge of many *Quacks* and *Empirics*, who cry up the most ridiculous Medicines, under the same Denomination.

Speculative, à *specular*, the studious or inquisitive Part of Medicine; the *Theory*, to distinguish from the *prætic*, or experimental.

Sphacelus, Gr. σφάκελος; the same with *Necrosis*.

Sphincter, σφιγγω, *constringo*, an orbicular Muscle, or one that is com-

pos'd of circular Fibres, by which contracting themselves, they are enabled to purse up or shut close the Parts they belong to; of which sort are the Sphincters of the *Bladder*, *Anus*, *Vagina*, *Uteri*, and the *Lips*.

Stagma, à *σῴζω*, *stillo*; a Caustic, or burning Liqueur, drawn by *Chymistry*,

Steatoma, ex *στάρις*, *adeps*, *sebum*, one of the encysted Tumours; so named from its Contents, like that of Fat or Suet.

Stigma, Gr. σίγμα, à *σίζω*, *pungo*; properly the Mark or Brand left after the burning of Thieves and Felons in the Forehead or Cheeks, whence the Word *stigmatizing* imply'd anciently some great Reproach; but with us it stands for a Seam or Scar left behind a Wound, Ulcer, or other Distemper preceeding; the same with *Catrix*.

Stimulus, à *stimulo*, to spur on, or prick; any thing which irritates or gauls the nervous Fibres, exciting therein some powerful Contraction, by which the Fluids are quicken'd in their Motion, glandular Secretion augmented, and the Spirits, before dull and torpid, rous'd up to shake off the Enemy; the principal of these are *Blisters*, which, in all sleepy Distempers, malignant and other nervous Fevers, do more than all other Remedies besides.

Stria, à *strio*, the Chamferings and cellular Partitions observable in some Bones.

Struma: See *Scrofula*.

Styloides, ex *στυλός*, *stylus*, ἵδρος, *forma*; a bony Process, so call'd from its Likeness to a Bodkin or Pencil: There are two such rising out of the Base of the Skull, and one an Appendage to the lower Part of each *Ulna* at the Wrist.

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Subluxation, ex sub, & luxo, a Bone as it were half out of Joint, when by a Stretch of the Ligaments suddenly, or their gradual Relaxation, the Head of the Bone moves out of its Cavity, lying even with, or on the Brims of the Cup, which may be possible in the Case of congested Tumours about the Joints, especially those of the Hip or Shoulder, relaxing of the said Ligaments; but otherwise, I believe, seldom happens: This Accident is named by some a *Demi Luxation*, by others a *Semi* one.

Subsultus, ex subsulto, vel ex sub, & salto, a Capering, Jumping, or Dancing; figuratively by Physicians for those Jerks and Leapings of the Tendons, particularly of the Hands and Wrists of dying Persons, or those labouring under malignant Fevers; which are always reckon'd amongst the most threatening Symptoms.

Suffusio, à suffundo, a Darknes or Cloudiness of Sight; of some Affinity to the *Cataract*.

Sugillation, à sugillo, to make black and blue: See *Echymosis*.

Sulcus, a Furrow, Ditch, or Trench; taken with us for a Tract made in the *Cranium* by the Saw, in *Trepanning*; or the Furrow in an Instrument called a *Director*, us'd in dilating of sinuous Ulcers.

Superfætation, à superfæto, to conceive again, or before the Delivery of the first Young, already impregnating the Female; but here meant of Nature's Luxuriancy in some vegetable Productions.

Supination, that Position of the Arm whereby the Palm of the Hand is turn'd upwards, contrary to the *Pronation*.

Suppuration, à suppure, to ripen, ex sub & pus, quod in purem convertatur humor; the Ripening of a

Tumour, or bringing it to *Matter*, the same with *Maturation*.

Sutura, the first of the Species of Articulation, under Synarthrosis, belonging to the Bones of the Cranium, being a Sort of Indenture, from the Points or Teeth interchangeably entering one another on either Side; which the chief are the Coronalis, Sagittalis, and Lambdoides; the first so nam'd from its encompassing the Head like a Crown; the second from its running lengthways, like a Dart over the Top of the Head; and the last from its Resemblance to the Greek Λ behind on the Occiput.

Sutura, à suo, to stitch or sow together, the Sowing up of Wounds, in order to their *Symphysis* or Union by the first Intention; of which there are two principal, the interrupted and continued.

Sutura sicca, the dry Stich, perform'd by Clothes spread over with some emplastic Medicine, and being laid on the Parts; so soon as they are dry'd on, passing a Needle through the Edge or Selvedge thereof, instead of the Skin or Flesh.

Symmetry, ex σὺν, cum, & μέτρον, mensura, a due Proportion of all Parts making up the whole; an exact Harmony or Agreement one with the other, in their Figure and Situation.

Sympathic, à συμπαρῶ, compati- or, a Suffering by Sympathy, or Consent one Part with another; a Fellow-feeling, as we say commonly.

Synarthrosis, à σὺν, cum, & ἄρθρον, articulus, that Articulation of the Bones, join'd by some Medium, and not intended for manifest Motion.

Synchondrosis, ex σὺν, & χόνδρος, cartilago, a Joining of Bones together by a Cartilage; as in the Ribs with the *Sternum*.

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Syncope, à συνκόπω, *concido*, a falling down suddenly, or dying away; fainting Fit.

Syndromia, συνδρομή, *Concurfus*, a Train of Symptoms, concomitant or attending upon the same Distemper.

Synymenſis, à συν, *cum*, & ὕμην, *Membrana*; a Conjunction of Bones by a Membrane, as in the *Fœtus*, thoſe of the Front or Forehead with the *Sinciput*.

Synovia, forte, à σὺν, & οὖον, the Humour flowing from Wounds or Ulcers in the Joints, or among the tendinous and nervous Parts, by its congealing inſtantly over the Flame of a Candle, or Heat of the Fire, conjectur'd to be a *Succus Nutritius* dripping therefrom.

Syntenofiſis, à συν, *cum*, & τένον, *tendo*, Conjunction by means of Tendons.

Syſſarcoſis, à συν, & σὰρξ, *caro*, *cum*, a Joining by the help of Fleſh.

System, à συν, *cum*, & σῶω, *ſto*, the whole Body of a Science, or the ſeveral Parts thereof connected.

Syſſole, Gr. à συσώλῃ, *contractio*, meaning that of the Heart and its Arteries; and contrary to *Diaſſole*, or Dilatation.

T.

T*Abes*, à tabeſco, to pine away, or diſſolve; a *Conſumption* of the Body: The ſame with *Marafmus*.

Talpa, an encyſted Tumour of the Scalp.

Talus, the ſame with *Aſtragalus*.

Tantalus, whom the Poets feign, as a Punishment, to have been ſo placed in Water up to the Chin, with Fruit bobbing againſt his Lips, yet ſo as that it was not in his Power to ſtoop to quench his Thirſt with the one, nor catch the other for Relief of his Hunger.

Taraxis, à ταράσσω, *turbo*; a Diſeaſe of the Eye, of kin to *Ophthal-mia*.

Terebellum, quaſi *parvum Ter-berum*, a Gimblet, or ſmall Piercer, us'd by Surgeons for perforating the Bones.

Tegument, à tego, to cover; the Skin with the other Membranes in-veſting the outer Parts of the Body.

Temperamentum, à tempero, to mix or mingle together; referring here to every Man's particular Con-ſtitution or Temperament.

Temperies, a Temper, or Mean, as to Heat, Cold, &c. in ſuch Tem-perament; a well conſtituted Habit of Body.

Teneſmus, à tento, to try; a trou-bleſome Endeavour to go to Stool, without voiding any thing unleſs *Mucus*, recurring frequently through Irritation of the Sphincter, from a ſharp and ſtimulating Matter, iſſuing out of the Glandules of the Guts, after *Dyſenteries*, and other Fluxes of the Bowels, of long Continuance.

Tenſio, à tendo, to ſtretch, a Diſ-tention of the membranous Parts, through an Afflux of Humours.

Teredo, a Worm that eats into Wood, in Greek *τερονδών*, taken me-taphorically for a *Caries*, or Rot-tenneſs in the Bones, appearing in like manner as if Worm-eaten, by the corroſive Humours preying upon, and altering their outward Frame or Texture.

Teres, the Ligament tying the Head of the Thigh Bone to the Cup, or *Acetabulum*, in the *Coxendix*; ſo call'd from its even, round, and ſlender Figure.

Teſſaceous, ex *Teſſa*, a Shell; any of thoſe ſhelly Subſtances or Grits, call'd *Absorbent*, from their Faculty of deſtroying ſharp Juices: See *Ab-sorbent*, alſo *Alkalins*,

Teſtis,

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Testis, signifying a Witness; figuratively applied to the Stones, *quod testentur esse virum*, according to some.

Theoria, à θεωρέω, *contemplor*, the speculative Part of any Art or Science, call'd *Theory*, in Distinction from the *practical* Part thereof: See *Speculative*.

Therapeutic, à θεραπεύω, *sano*, the Part of Physick teaching the Cure of Diseases.

Thyreoides, ex θυρεός, *scutum*, & εἶδος, *forma*, a Cartilage of the Wind-Pipe, so nam'd from its Shape like an antient Shield or Buckler, call'd otherwise *Scutiformis*.

Thyroarytænoides, ex θυρεός, *scutum*, ἀρῶν, *aerem haurio ἀνοίγω*, *aperio*, & εἶδος, *forma*, a Pair of Muscles proceeding from the Cartilage before-mention'd, serving to contract the opening of the *Aspera Arteria*, or Wind-Pipe; concerning which see *Aretænoides*.

Tonic, à τένω, *extendo*, the proper inherent Power of Contraction and Extension of the muscular Fibres, their Spring or elastic Force, to extend and draw themselves back again.

Topic, à τόπος, *locus*, an external Application to the Parts.

Torrefy'd, à torreo, any thing dried before the Fire, in order to pulverise, or reduce it to Powder; more commonly applied in Physical Prescription to the Root of *Rhubarb*, first cut into thin Slices, and after torrefy'd.

Toxic, *Toxicum*, Gr. τοξικόν, quasi *taxicum*, à Taxo Arbore; vel à τόξον, *arcus*, quia sagittas soliti sunt veneno perungere; a Term, it seems, borrow'd from the poisoning of Weapons, and with us, understood of any Venom or Poison whatever. See *Deleterious*.

Traumatic, à τραῦμα, *vulnus*, vel

à τραυμαλίζω, *vulnero*; Remedies for wounded Persons.

Tremor, à tremo, any Trembling or Shaking whatever, particularly that attending the *Paralysis*, also malignant Fevers; which, together with the *Subsultus*, portend very often, in these last Cases, approaching Death.

Tuberculum, i. e. *Tuber parvus*, any Bump or Knob rising in the Skin or Flesh underneath, sprouting like an Excrescence; such as *Pimples*, *Warts*, &c.

Tubuli, a Diminutive from *Tubus*, a little Conduit-Pipe, conveying Water from a Fountain hard by; with us figuratively taken for the Blood-Vessels, both Veins and Arteries, carrying their Liquor to and from the Heart; the small Branches also of the *Lymphæducts*, and of the Nerves themselves, are often called by the same Name.

Tunic, à tunica, the same with Tegument; but farther apply'd as to the Vessels themselves, and *Viscera* contain'd under the latter or outer Teguments, and cloathing or investing the same.

Tumor, à tumeo, any Swelling whatsoever.

Tympanites, a Swelling of the Belly; so called for that the Membranes of the Belly are so expanded and stretched out by a flatulent or windy Disturbance, as that, being struck upon, it sounds like a Drum; called in Latin, *Tympanum*.

Tympanum, the Membrane expanded over the *Meatus Auditorius*, or Passage of Hearing, from its Likeness to that over the Drum-head, subservient to the Conveyance of Sounds to the *Sensorium*, so denominated.

Tyro, a Novice in the Art, a young Beginner.

V. P.

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V

V*agina*, a Case or Sheath, here meant of the Passage leading from the *Pudendum* to the Neck of the Womb.

Vaginalis, ex *Vagina*, any thing that encloses some other Parts, here particularly applied to the outward proper Coat of the *Testes*, or which encompasseth the same.

Valetudinary, qui *adversa valetudine laborat*, a sickly Person, one of an infirm State of Health.

Varicocele, idem quod *Hernia varicosa*, a Rupture of the spermatic Vessels; or the same, by some Distemperature of the Blood, or in the Vessels themselves, become *varicous*.

Varicosum corpus: See *Pampini-forme*.

Varix, à *varus*, i. e. *obtortus*, by the Surgeons understood of those black, knotty, distorted, and swell'd Veins observable more especially on the Legs of certain Persons, distended with a gross and fæculent Blood.

Variolous, ex *variolis*, of or belong to the Small-Pox, or rather the Fever accompanying that Distemper.

Vectis, à *veho*, quod super eos pondera *vehebantur*, & *elevantur*, a Leaver, unto which the Muscles of

our Bodies are aptly compar'd, for their Office and Use in lifting and moving others besides their own.

Vehiculum, à *veho*, to carry or convey in some Machine, as a Coach or Waggon, from one Place to another: Among Prescribers of Physic to the Apothecary, it denotes any Liquor in which to dissolve a Powder, or Bolus, for its easier and cleaner Conveyance to the Stomach.

Venæsection, ex *vena*, & *seco*; the same with *Phlebotomy*.

Verminous, ex *vermis*, a Worm, a Fever so term'd thence arising; also an Ulcer, from its peculiar Putrefaction fostering those Creatures.

Vestige, *Vestigium*, ex *vi*, & *figo*, Gr. *σημα*, a Mark or Impress, like that left by a Foot in Snow or Clay, or the Seal in Wax; but here meant of the Remains of some former Distemper, by which to discover the same had preceded; as the Pits of the Small-Pox, the Seam or Scar left after a Wound or Ulcer.

Vibration, à *vibro*, to shake; usually ascrib'd to the Motion of a *Pendulum*, but here intended for that of the Heart; the same with *Pulsation*.

X

X*iphoides*, à *Ξίφος*, *ensis*, & *ἵσος*, *forma*; see *Ensisformis*.

